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ABSTRACT

Presented are 18 author contributed papers from the 1975 New Orleans conference on the education of severely and profoundly retarded students. The document includes papers on the following topics: educational programs (S. Bijou, J. Tawney, E. Sontag); the developmental approach to curriculum (N. Haring); architectural considerations (G. Gray); education in non-school settings (C. Galloway, C. Colwell); issues in service delivery (E. Wilson); parent involvement and training (F. Bicknell, L. Watson); teacher education (E. Meyen, F. Connor); instructional program components (W. Williams); and financial factors (J. McGrew). (CL)

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EDUCATING THE 24-HOUR RETARDED CHILD

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Papers presented at a conference
on education of severely and
profoundly retarded students.
March 31-April 2, 1975, New
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2709 Avenue E East, Arlington, Texas 76011

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EDUCATING THE 24-HOUR RETARDED CHILD

National Training Meeting on
Education of the Severely and
Profoundly Mentally Retarded

August 1975

National Association for Retarded Citizens

FOREWORD

In the summer of 1974, the National Association for Retarded Citizens was awarded a special project grant from the Division of Personnel Preparation, Bureau of Education for the Handicapped, to conduct a national training meeting. The purpose of this meeting was to provide a wide range of information concerning programming for severely handicapped persons and to equip the participants to better cope with the tasks of preparing personnel and providing educational services to the severely and profoundly retarded.

The training meeting was held in New Orleans, Louisiana, from March 31 through April 2, 1975, with over 700 persons in attendance. Participants came from 46 states and one foreign country. Twenty resource persons were utilized during the meeting. Major areas covered at the conference included the philosophical basis for public school services for severely and profoundly retarded students, curriculum development, administrative issues and personnel preparation.

The papers contained in this publication focus upon these issues, and served as the basis for the presentations in New Orleans.

NARC wishes to express its personal thanks, not only to all the contributors and speakers, but also to all who attended and participated in the conference. Through continuing cooperation between professionals, parents, and others interested in the welfare of mentally retarded persons, we will be able to realize our mutual goal of assuring quality public school services for all persons, including severely and profoundly retarded students.

Marion P. Smith

Marion P. Smith, President NARC

Project Director: Brian M. McCann, Ph.D.

Project Coordinator: Catherine Payne Moore

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EDUCATING THE 24-HOUR RETARDED CHILD

by

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Chairman, NARC Education Subcommittee

March 31, 1975

The year 1975 commemorates the National Association for Retarded Citizens' Silver Anniversary. For 25 years our organization has played a major advocacy role on behalf of America's more than six million mentally retarded citizens. Since its conception, the National Association for Retarded Citizens has been concerned with the marked inequities which exist within the public school systems of this nation with respect to mentally retarded children, particularly severely and profoundly retarded children.

As early as 1953, the National Association for Retarded Citizens' Board of Directors adopted an Education Bill of Rights for retarded children. This Bill of Rights was followed in 1964 by a set of guidelines in the form of policy statements intended to assist state and local Associations for Retarded Citizens in obtaining adequate educational services.

Although considerable progress has been made in the last 25 years concerning the provision of educational services for mentally retarded persons, a substantial portion of school-age mentally retarded persons is still being denied a public school education. Even today, public school programs are primarily designed for mildly and moderately retarded students.

The problem is further compounded, as indicated in the President's Committee on Mental Retardation report, The Six Hour Retarded Child, in that existing special classroom space is often filled by children who have been mis-classified as mentally retarded because of problems which are essentially cultural, behavioral, or bilingual in nature.

In a 1970 position paper entitled, Classification and Placement in Special Education Classes, The National Association for Retarded Citizens concurred with the President's Committee on Mental Retardation that there were a number of mis-diagnosed children in special classes particularly for the mildly and moderately retarded. At the same time, however, the National Association for Retarded Citizens pointed out that there was a significant segment of the school age population of mentally retarded children that should have the benefit of special education services. This mis-allocation of limited special classroom space and services was particularly penalizing to those children who were functioning at the severe and profound levels of mental retardation. Faced with limited space and money, with a limited number of specially trained teachers, with large numbers of mildly and moderately and mis-diagnosed children to provide services for, many administrators simply turned away countless thousands of children of school age who were severely and profoundly retarded.

In some school districts where adequate funding, facilities and faculties were present, severely and profoundly retarded children were still denied services. These children were denied public educational opportunities by definition. Administrators would say that since this child could not possibly return anything tangible to our society that he was not entitled to a public school education.

Obviously, these individuals had not read the Constitution of the United States or the Constitution of any of our fifty states. As many of you know, the problem was so acute that the Pennsylvania Association for Retarded Citizens brought legal action against the Commonwealth of Pennsylvania in 1970-71 to provide equal educational opportunity for all mentally retarded persons. This suit established the "Right to Education" for all mentally retarded persons including the severely and profoundly retarded.

In 1971, also, the National Association for Retarded Citizens issued a Policy Statement on the Education of Mentally Retarded Children. The following quote highlights the National Association for Retarded Citizens' position on the education of severely and profoundly retarded persons:

> "Public school education must be provided for all mentally retarded persons, including the severely and profoundly retarded. There should be no dividing line, which excludes children from public educational services. If current educative technologies and facilities are inappropriate for the education of some retarded persons, then these existing educational regimes should be modified."

As you know we are here this evening and for the next two days to focus our attention on the education of the 24-hour retarded child - the severely and profoundly retarded child.

This conference would not have been possible if it were not for the Bureau of the Education for the Handicapped who provided the necessary funds which allowed the National Association for Retarded Citizens to adequately prepare for such a necessary national working conference.

In 1971, the then U. S. Commissioner of Education made education of handicapped children one of the major objectives of his office and called for the development of a national goal of full educational opportunities for all handicapped children by 1980.

More recently, the U. S. Office of Education has gone on record as being committed to assuring equal educational opportunities for all handicapped children.

The efforts of the Office of Education in meeting this commitment are being coordinated through the Bureau of the Education for the Handicapped and we are pleased to have the Director of the Bureau of the Education for the Handicapped, Dr. Edwin Martin with us this evening as one of our featured speakers.

We are particularly pleased that the BEH's Division of Personnel Preparation has identified as one of its priorities the training of personnel to serve the severely and multiply handicapped.

In closing, I would like to point out that many necessary changes must be made on the part of educational service agencies in order to meet their new responsibilities of educating all children.

It is the National Association for Retarded Citizens' belief that this conference will aid educators in gearing up for the task that lies ahead. We fully realize that the "zero-reject" movement in the public schools has subjected the educational community to the brunt of new parental, legal, and legislative pressures.

Educational administrators and professionals are increasingly faced with the problems of reconciling numerous programmatic, economic, architectural and legal factors which are now beginning to impact on the public schools.

In many instances, both educators and parents, alike, have been unprepared to cope with this sudden shift in responsibility. It is the National Association for Retarded Citizens' hope that this conference, "Educating the 24-Hour Retarded Child", which brings together nationally for the first time the persons responsible for monitoring and delivering services to the severely and profoundly mentally retarded, will be a major step in assuring appropriate public school educational services for severely and profoundly mentally retarded children.

THE SEVERELY AND PROFOUNDLY RETARDED

PAST AND FUTURE*

by

Philip Roos, Ph.D., Executive Director
National Association for Retarded Citizens
Arlington, Texas

March 31, 1975

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* Dr. Roos' remarks were accompanied by a three-screen video presentation.

We are plunging into the final quarter of the 20th Century. A century of scientific enlightenment - a century of humanitarian values. Never before has mankind possessed such rich resources, or known so much, or had such great potential for fulfilling its highest aspirations.

We live in a great land - the land of the free, the home of the brave. A land based on a religion of mutual love. We are about to celebrate our nation's Bicentennial. We can be justly proud of the ideals upon which our country is founded, liberty and justice for all, individual inalienable rights. Yet, the basic human and legal rights of countless thousands have been violated during the past two centuries. Citizens have been denied access to desperately needed resources and subjected to dehumanizing conditions. These discriminatory practices have been sanctioned on the assumption that there are degrees of humanness, and that only the "fully human" are entitled to participate in society - that deviations from cultural norms are valid grounds for rejection and isolation.

At birth all humans are helpless, parasitic, totally unable to cope with their environment or to survive unaided. Unlike other animals, humans have almost no instinctual behaviors. Each individual's future, indeed his very survival, is predicated on learning. He must acquire a staggering amount of information and develop an amazing repertoire of skills.

Although individuals differ markedly in learning rate and complexity of skills ultimately mastered, all can learn if provided with opportunities best suited to meet their individual needs. Yet, we have a long-standing tradition of systematically excluding from the educational process those individuals in greatest need of learning experiences - those who have the greatest difficulty in learning. Indeed, our terminology has reflected hopelessness and even derogation. We have generated self-fulfilling and self-limiting prophecies.

Until very recently these individuals typically had but two options: They could remain with their parents indefinitely - while excluded from community services essential to their development; or, they could be placed in institutions for life-long "custodial care." Lack of essential learning opportunities, combined with social isolation, regimentation and dehumanization has greatly curtailed the development of these persons. Much of the maladaptive behavior found in the severely handicapped is attributable to their environment rather than to their biological limitations.

Recent legislation, federal regulations and court decisions have reaffirmed the basic premises of our nation, mandating equal rights for all persons, assuring that all share in society's resources and guaranteeing maximum possible individual freedom. Landmark class action suits on behalf of handicapped persons in such locales as Pennsylvania and the District of Columbia have established their rights to education. Other suits have dealt with the right to treatment, and freedom from peonage.

We are on the verge of a new era for the severely handicapped. At long last we stand ready to shed the hopelessness of the past and to begin serving thousands of our fellow citizens. Yet, we should not delude ourselves into the belief that these persons' biological limitations are inconsequential. We cannot comfort ourselves with the naive assumption that all people can develop into so-called "normal" human beings if only presented with the proper environment.

We are now concerned with the most severely handicapped members of the human race - individuals whose nervous system has been seriously damaged or never developed properly, or, whose behavior is grossly deviant from developmental norms.

The severely and profoundly mentally retarded include approximately the lowest functioning 5% of the retarded population, or those persons with IQ's falling approximately below 35. In statistical terms, this means that they are functioning at least four standard deviations below the mean, or that more than 99% of persons learn more easily than they do. As a matter of fact, many of these individuals may be unable to complete any items on standard intelligence tests, so that their IQ's may be reported as "unmeasurable".

Severely and profoundly retarded children entering school may manifest many of the following: Lack of toilet training; hyperactivity and short attention span; lack of skill in eating, dressing, and grooming; little or no language, and epileptic seizures of all types. In addition, many of these children may have developed irritating habits such as drooling, screaming, destructive and self-destructive behavior, and stereotyped acts or other mannerisms. Severely and profoundly retarded persons may also suffer from one or more other major handicaps, including blindness, deafness, cerebral palsy. In spite of their serious problems, all these children are human beings. All have a right to learn, to develop, to be treated as individuals, to actualize themselves.

Current technology can help these individuals. Impressive programs are now underway. Research has documented the value of new procedures. Techniques are now available which have demonstrated effectiveness. But, we are still in the dark ages when it comes to understanding the human mind. Today's technology is primitive. We have taken but the first few steps in what promises to be a long and rewarding journey.

Educators now face major challenges which require immediate action. These include development of curricula suitable for the severely handicapped, educational programs in non-school settings, parental involvement, services to minority groups, architectural considerations, training of personnel, administrative issues and others. We must also recognize that we are living in an age of technological explosion, an age of telescoping time. We must learn to use advances in other fields to improve our own efforts on behalf of the severely handicapped.

We must not become prisoners of our past - enamored with our traditions - limited by our biases - or restricted by today's technology. We must apply the best we have today, and we do have the capacity to help thousands, but, we must also grasp for the future - impatient for what lies ahead so that all our citizens can truly participate in the human adventure.

THE FEASIBILITY OF PROVIDING EFFECTIVE EDUCATIONAL PROGRAMS FOR THE SEVERELY AND PROFOUNDLY RETARDED

by

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Presented by

Sidney Bijou, Ph.D.
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Member NARC Research Committee

March 31, 1975

Certainly one of the most promising approaches to providing an educational program for the severely and profoundly retarded individual is through applied behavior analysis. If we did not believe that, NARC would not have organized this meeting and we would not have been invited to participate in it. It is interesting to note that the behavioral approach, as we know it today, has been applied to the teaching of the retarded at all levels for just a little over 15 years and at present it is considered by many ranking educators (Kirk 1971) to be the approach with the greatest potential. Some have claimed that it has already had a significant impact, pointing to terms such as prescriptive teaching, precision teaching, data-based teaching, classroom management, and on and on.

Current interest in the application of behavior principles to the teaching and training of the retarded undoubtedly stems from a variety of causes, the three most obvious being the ineffectiveness of teaching and training methods used in the past (Johnson, 1962); the popularity of the behavior approach in other areas, especially in clinical treatment (Drash & Freeman, 1973; and Hoon & Lindsley, 1974); and the renewed public interest in the teaching and training of the retarded individual through right-to-education and right-to-treatment established through legislation and court action. But so much for etiological speculation. Our task today is to point out some problems, characteristics, and promises of this approach for the training of the extremely retarded individual in terms of: (1) the problems associated with public education, (2) the essence of the application of behavioral analysis to teaching and training the severely and profoundly retarded, and (3) the problems of implementation.

Problems of Public Education

While it is true that the approach has excellent potential and is being rapidly accepted, we nevertheless must recognize that its progress has been far from smooth. Many problems have resulted from misunderstandings about the nature of this approach and from abuses brought about by the overzealous, the well meaning, but inadequately trained practitioner.

Misunderstandings

There has been confusion about the meaning of behavior modification behaviorism, and behavior theory. Sometimes behavior modification is considered a theory of psychology rather than the application of a theory. Sometimes, behaviorism is considered a theory of behavior, sometimes an applied endeavor, and sometimes a philosophy of science. When it is correctly identified as a philosophy of science it is most often mistaken for 1920 Watsonian behaviorism with its physicalistic and mechanistic concepts and its denial of internal processes. Modern variations of behaviorism deal with complex interactions among functionally defined stimuli, setting conditions, and behavior and deal with internal interactions as in its concepts of self management, problem solving, and creative behavior (Skinner, 1974).

There has also been confusion between the two kinds of conditioning: respondent (classical or Pavlovian) and operant (instrumental). To most people, conditioning is conditioning. To explain that operant conditioning is the strengthening of "purposive" behavior and is more like trial-and-error exploratory learning than it is like Pavlovian reflex conditioning is to make a distinction that falls on deaf ears. Operant conditioning is vastly different from the Pavlovian conditioning paradigms which have shocked the public in Brave New World, 1984, The Manchurian Candidate, and A Clockwork Orange.

Those who fail to differentiate operant and respondent conditioning hold that behaviorism is evil and nothing good can ever come of it. Even when the applied aspect of behaviorism can be demonstrated to be helpful in the educational and mental health areas, they maintain that even in the long run, the ends fail to justify the means.

Misapplications

Another obstacle to steady progress has been generated by those who hold that the approach is so simple that anyone can use it ("It's sort of common sense.") With little or no training and the best of intentions, they apply their conception of the behavioral approach. Consequently, their practices of time-out from positive reinforcement, deprivation, aversive contingencies, and token economy do not bear the slightest resemblance to the technical meaning of these terms and are not applied under proper circumstances and with proper safeguards. As one might expect, the results they obtain are not comparable to those reported in the journals and they conclude, therefore, that they have tried behavior modification and found that it does not work. These practitioners perform a disservice to the individuals whom they have treated and to future generations for such misinterpretations and misrepresentations arouse negative public attitudes toward support for further research and development.

The Need for Public Education

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Applied behavior analysis sorely needs a public-education program which describes (1) its origin, philosophy of science, and theory of human behavior, and (2) its implications for education and training.

It is essential that the public knows that behavior analysis, as an approach to the understanding of human behavior, did not spring forth full blown but evolved instead from a long history which dates back to Aristotle, and in more recent times to Decartes, and that its philosophy of science is basically consistent with that of the natural sciences, such as physics, chemistry, and biology. The public should also know that behavior analysis or behavior theory, as it is often referred to, exists in several models, some with a combination of observable and hypothetical mental terms such as "drive", and some with only observable terms (what can be seen and measured). Furthermore, the public should be informed that most of the variations on behavior analysis focus not on group behavior and its correlations with group conditions but on the behavior of a single unique individual in relation to specific and concrete occurrences that constitute his environment.

That part of the public-education program which describes the implications of applied behavior analysis for education and training should first and foremost clearly explain how the terms, principles, and assumptions of the system differ from the popular meanings of the same concepts. An example is the way in which failure to learn is viewed. Traditionally an individual who does not learn what is presented is considered to be incapable, indifferent, unmotivated, or lacking in some way. The behavioral view, on the other hand, is that if the student does not learn, something is wrong or lacking in the teaching situation. This guiding principle is based on the assumption that changes in behavior result from changes in circumstances and that most circumstances are observable and modifiable. Another example. Popularly, the teacher, her general demeanor, the appearance of the classroom, etc., in other words, the physical and social aspects of the educational environment, are evaluated in terms of social and physical dimensions, "She's well dressed and pleasant," - "She's grouchy," - "The classroom is artfully decorated," - "The classroom is drab and uninspiring," etc. In a behavioral approach, on the other hand, these educational environments are analyzed in terms of their meaning to the individual, that is, their functional properties to him and him alone. Hence, instruction of all sorts must be individualized. The only, and by no means simple, question is how to engineer teaching situations so that individualization of instruction can be achieved as much and as often as possible.

Behavior Analysis Applied to the Teaching and Training of the Severely and Profoundly Retarded Individual

It is interesting to note in passing that one of the first operant conditioning studies with humans was done with a profoundly retarded child (Fuller, 1949). Other operant studies had in fact been conducted with infants in the 1920's but investigators in those studies (Jones, 1924; Watson & Rayner, 1920) thought they were employing classical conditioning techniques. In Fuller's study, an 18-year-old institutionalized subject whose repertory consisted of lying on his back, opening and closing his mouth, blinking, and slightly moving his arms, head and shoulders was conditioned in four sessions to raise his right arm for liquid food. The attending physicians at the institution claimed that until that time the boy had not learned anything in his entire life.

We have come along way from the Fuller study. We speak not about operant conditioning alone but about behavior analysis. And we now postulate that both normal and retarded development generate from interactions between behavior and environmental events. The only difference between normal and retarded development is the conditions under which stimulus and response functions are acquired. When the organismic (physiological), social and physical conditions of development are extreme or deficient, development will be deviant and almost always retarded (Bijou, 1966).

From this point of view, training or retraining of any kind requires the preparation of an educational environment that encourages learning and development. Such an environment is not static; it consists, rather, of orderly changes designed to alter behavior in the direction of pre-established goals.

Since teachers and trainers can do little about the state of affairs inside the skin of their students but can do much to create and modify environments to facilitate the acquisition of functional interactions patterns, behavior modification becomes environmental modification in the truest sense of the word.

The Teaching and Training Format

Over the past 15 years, the format for carrying out an effective program of education, training, or behavior change has stabilized. Most of the steps in the format have been called by various names, some quite exotic, but all refer in one way or another to these basic ingredients: (1) setting goals in behavioral terms, (2) assessing current functioning with respect to these goals, (3) applying learning and motivational principles, (4) monitoring the effectiveness of teaching, and

(5) arranging conditions to maintain and generalize the gains achieved. Each component in this teaching format is essential. If any is omitted or is non-functional, one cannot claim to be employing a behavior analysis approach. We shall comment briefly on each step as it applies to the education and training of the severely and profoundly retarded individual.

1. Setting goals in behavioral terms. Much has been written about the reasons for setting the teaching goals in clearly stated behavioral terms. Nothing more need be said here except to reiterate that any teaching procedure will be more effective if it is oriented toward achieving unambiguously stated objectives. There remains the two-fold problem, however, of what goals should be selected for any particular child and who is responsible for selecting them.

Traditionally, education has focused upon the question, "What shall be taught?" to the relative neglect of the equally important questions of, "How can it best be taught (the technology of teaching)?" and, "Has it been learned (evaluation)?" It comes as no surprise, then, that of the program components identified above, decisions about what should be taught in an instructional sequence are perhaps the most easily made.

In a general sense, normalization is the goal of the inclusive curriculum for the severely retarded. Teacher should train the student in as many skills as are necessary for adequate functioning in the community or in the least restrictive environment. Though the task of delineating the behavioral repertoire necessary for "adequate functioning" is complex and admittedly somewhat arbitrary, there have been several projects which have made impressive efforts at cataloguing behavioral objectives for the severely handicapped over a variety of performance areas (perceptual-motor, social, cognitive, prevocational, and vocational). Some of the program goal behaviors are the familiar ones that fit neatly under the rubric of the intellectual and academic skills. Other objectives include the development of emotional or affective reactions such as liking for school, teacher, and school subjects. Still others pertain to the development of new motivations in the form of new interests and attitudes that extend beyond the confines of the classroom, and still others refer to the acquisition of personality traits, such as concentration, persistence, curiosity, and independence. All are treated as goals to be achieved and all can be treated by the applied behavior analysis format.

To say that it is relatively easy to specify behavioral objectives for the severely and profoundly retarded is not to imply that there are no ethical issues in such goal setting. Clearly, controversy exists, and revolves most often around the question of how much should be taught. Given the necessary technology, is it worth the effort and expense to teach the severely handicapped to read? Should their reading be limited to functional and safety words (Exit, POISON, Stop, Men/Women) or should it include the teaching of words commonly taught to beginning readers (primer and preprimer vocabulary)? And given the optimism of behavior analysis - the belief that almost anything can be taught if it is adequately task analyzed and programmed in an appropriate environment - the problem boils down to agreement as to where to stop teaching. Final decisions about what to teach will depend in large part on the power of our instructional technology. The question of what to teach is ultimately subordinate to the question of how to teach it.

Confounded with decisions about what should be taught the severely retarded is the question of who is the decision-making agent. For the normal child, goals are set both by parents and by other adults in the guise of school board members, curriculum specialists, and university teacher educators. We suspect that for the severely retarded a similar constellation of concerned adults will be involved in the specification of training objectives, but parents or caretakers may have more input than usual, and, as we have indicated, the client himself becomes an important aspect of the curriculum development process.

2. Assessing current functioning with respect to the goal selected. Until recently, the terms assessment and measurement were most closely associated with the administration of standardized, norm-referenced tests. The student being evaluated was asked to respond to a standard sample of items in an artificial (testing) environment. Performance on this sample of items, assumed to be representative of the student's larger repertoire, was compared with the performance of others of similar chronological age. Labels and educational placements were then assigned on the basis of these comparisons.

Recently, critics of standardized testing have increased both in number and in volume, and the use of such norm-referenced measures has been attacked from a variety of positions. There is general agreement (among critics at least) that norm-referenced measurement is an inappropriate strategy for evaluating the effects of instruction and similar agreement that many published norm-referenced instruments are technically inadequate.

From the point of view of a behavior analysis, however, perhaps the most damning complaints are that norm-referenced measurement generates a detrimental label while failing to generate a specific, educationally relevant diagnosis. The major purpose of initial assessment in the behavior analysis approach should be to ascertain the competencies of a child so as to be able to establish a workable starting point for an educational and training program. In light of this goal, norm-referenced measurement is simply nonfunctional: To know that John is "trainable" in fact tells you nothing about what John might be trained to do. To know that John scored "significantly lower than Mary" provides no instructionally relevant information about either child's level of functioning.

Not only is norm-referenced assessment not functional, but there is increasing evidence that it can be detrimental to the development and happiness of a child. Recently Hobbs (1974) published a report of a comprehensive study by a distinguished group of investigators of the effect of labels. Their summarizing statement was, in a nutshell, that diagnostic labels do more harm than good for children and that diagnostic categories should be replaced with descriptions of specific classes of behavior.

A welcome and necessary complement to norm-referenced measurement is criterion-referenced measurement. A criterion-referenced test is one that yields scores that are directly interpretable in terms of specific performance standards. A child's performance is compared, not with the performance of others, but with a predetermined behavioral performance criterion. Specific information about performance competencies (objectives mastered) is retained rather than lost in a translation to standard scores. With criterion-referenced measurement there is no automatic definition of half the population as "below average." An individual's performance over time is compared with his own previous behavioral domain rather than with the performance of others who may be acquiring skills at a faster rate. The emphasis is on continued mastery rather than relative standing.

The translation of criterion-referenced measurement performance into educational programs is direct: What is to be taught is that which has not yet been mastered. Assignment of labels can be avoided altogether.

If the tasks one is teaching are cumulative - and this is usually the case with developmental skills - then mastery of each subcomponent is necessary for continued instructional success. That John is in the bottom 10% of the population is irrelevant if he has in fact mastered the skills to move into the next level of programming. Criterion-referenced assessment, rather than emphasizing behavioral or developmental deficits, stresses the identification of existing competencies. Those competencies form a base which is then expanded and differentiated into a repertoire that more closely approximates normal performance.

While the use of criterion-referenced tests to evaluate entry-level functioning in various developmental areas and the use of observational recording techniques to determine base rates of responding both provide considerably more instructionally relevant information than do norm-referenced techniques, still more information is needed for an adequate functional assessment. In addition to describing the child's repertoire - what he can do - it is equally important to determine functional consequences and functional discriminative stimuli: under what conditions (e.g., verbal instructions, modelling, or physical guidance) and for what consequences (e.g., smiles, praise, or bits of breakfast cereal) will he actually perform? Assessment is appropriate not only for behavior but for every aspect of the training contingency.

Furthermore, there is a need to evaluate both the target and training environments to determine what consequences are naturally available and to identify the specific performances on which the consequences are contingent. The child should be taught behaviors that are appropriate to, and which will be maintained by, the target environment. To gather this kind of information we must develop the techniques to assess environments.

3. Implementing the educational program: applying principles of learning and motivation. The third step in the applied behavior analysis teaching format is the utilization of learning and motivation principles to manage the interactions between a child, who is treated as a unique personality, and the educational environment. There are many programs for the retarded child in which careful attention is given to setting goals in behavioral terms and to assessing the child's specific competencies in the curriculum areas; unfortunately, the behavioral approach often ends there. The teacher is told to select the teaching method that best suits the child and that anything she decides on will be acceptable. This conception of teaching is in sharp contrast to the behavioral notion that teaching is the arrangement of conditions that facilitate learning and that the good teacher is expert in presenting tasks and materials, prompting or priming responses, and arranging contingencies and setting factors. The effective management of antecedent, consequent, and setting

factors in ways that move the particular individual toward educational goals defines the art of teaching.

Many futurists and critics of education like to say that we use only a small fraction of our brain power and that when we know more about the structure and functioning of the brain we shall be able to greatly expand our mental abilities. They may have a point. But another way of viewing the limited use of our potential is in terms of the limited application of what we know about learning and motivation. Our guess is that a behavior analysis of the activities of an average teacher will show that she utilizes a very small fraction of our current knowledge. As more teachers and teachers-in-training are taught the principles of learning and motivation, and how to apply them, the effect on the child's potential for school learning will be tremendously enhanced. Moreover, the principles themselves will be further refined and extended through basic and applied research. In addition, wider and more effective classroom assistance, e.g., teacher aides, proven teaching devices and programs, etc. will enable the teacher to devote more of her time to actual teaching. A survey by Conont (1973) showed that teachers currently spend only 30 percent of their time in activities that are even remotely related to academic instruction and learning.

4. Monitoring the effectiveness of teaching. Keeping records of a child's performance in class has always been a part of standard educational practice. The behavioral approach ties into this tradition but moves in several new directions. It suggests that the main purpose of record keeping should not be to grade a child's performance but to provide information on his progress in the program and his mastery of the tasks assigned. In order to be maximally effective, programs must be tailored to individual needs and must be continously adapted as appropriate new skills are acquired and inappropriate behaviors eliminated. The need for continuous monitoring of student progress is highlighted in a criterion-referenced system where progress through the instructional sequence is based not on length of time in the program but upon mastery of prerequisite skills.

Behavior analysis is a responsive and self-correcting system: if a child is presented with a particular teaching sequence and does not learn, the failure is attributed to an inadequately conceived or executed program and not to some shortcoming of the child, an all too prevalent practice. It is the program that is modified, not the child who is blamed.

The child is undoubtedly the best indicator of the appropriateness of an assignment. It follows that the sooner program failures can be identified, the sooner the program can be modified, and the more rapidly can learning take place. A system of direct and daily measurement of student progress guarantees teacher accountability: data demonstrate competent programming and effective teaching.

5. Generalization and maintenance of learning. The fifth step in the applied behavior format is that of programming for the generalization and maintenance of behavior acquired. The generalization of learned behavior to environments other than the one in which the training takes place does not just happen simultaneously with the achievement of the training objectives. Generalization is, instead, an active and essential part of training. Conditions must be thoughtfully and planfully arranged so that relevant aspects of the environment outside the training situation come to control the newly acquired behavior. Maintenance, like generalization, is also an active process and requires the arrangement and presence of environmental conditions that will support the responses acquired.

Generalization and maintenance procedures have been the last step to be incorporated into the behavior analysis format because it has been difficult to convince workers in the field that traits are behaviors under the control of the environment rather than entities existing within the individual. According to our behavioral formulation, stable environments produce stable traits while changing environments result in changing traits (progressions or regressions). Educators and psychologists are still insisting that a treatment or educational program can adequately be evaluated in terms of performance six months or more after termination of the treatment program. The question of the adequacy of the child's post-treatment environment is not yet given the serious attention it deserves.

The amount of planning and effort required to generalize and maintain an acquired response class varies with the nature of the response class. Some responses like walking require very little additional programming to achieve generalization because walking per se makes it possible for a child to receive, almost automatically, large amounts of reinforcement from the physical and social environment. Generalization of other responses, however, especially those dependent on social reinforcement (such as talking in complete sentences) require a great effort on the part of the teacher. One favorable consequence of this requirement is that it presents an opportunity for the teacher to influence parents to become involved in training and thereby to reflect upon their child-rearing practices.

One final comment about the applied behavior analysis format. To claim that it has stabilized does not mean that it is a closed system. On the contrary, it is an open system. Although the outline of its components and their relationships are clear, the details will continue to be modified as findings from both basic and applied research warrant. Since the system is based on entirely empirical relationships, the changes will be revisions and extensions rather than turnabouts, and complete abandonments. In this way, this approach is very different from most others that have been offered to the educational community. For the behavior analysis approach to continue to grow and flourish, there is need for a steady flow of information from the research laboratory, basic and applied. One is dependent upon the other, hence both are essential.

Implementation

The applied behavior analysis format for teaching the severely and profoundly retarded child has been implemented in two kinds of settings: the classroom-like setting in a community or residential school, with a teacher and an aide or aides; and the home setting, with a teacher teaching a child, or teaching a parent to teach her child. The first situation is analogous to applying the methods of the clinic to the classroom with the teacher functioning in the role of a clinician. The latter is comparable to bringing the techniques of the classroom into the home with the teacher functioning like a parent, or a neighbor advising a parent on child-rearing practices. The classroom-based and home-based models can of course operate together, beginning with training in the home at an early age. When a child attends school, the home training he receives from his parents and the school training by the teacher may be coordinated through conferences and coordination of progress records, a format followed in several of the replications of the Portage Project (Shearer & Shearer, 1972).

No matter what the teaching setting, implementation of the applied behavior analysis format requires teacher training and commitment, administrative support, and active parent participation.

Teacher Training and Commitment

Even though applied behavior analysis may seem like organized common sense, something like "what any good teacher does every day of the week", or a simple recipe that any intelligent person can follow, there is need for teacher training and for teaching personnel with a commitment (motivation) to enhance the development of the retarded child.

A first step in the preparation of teachers for the severely and profoundly retarded might be to modify the behavior of teacher trainers in colleges and universities. Classroom teachers and teacher trainers alike must abandon their traditional concepts of curriculum if they are to be successful teachers of the severely retarded. Teachers must in fact be trained to deal with a whole range of behaviors that have rarely been the concern of the public schools. They must be prepared with programs for toilet training, for eliminating self-destructive and self-stimulatory behaviors, for teaching eye contact and imitative responding, for teaching community survival skills, and so on. These very special teachers cannot be content nor limit themselves to giving training in verbal behaviors - the traditional reading, writing, and arithmetic - that may guarantee success in the later school environment. Clearly, the traditional three R's are not enough. The curriculum must be inclusive: teachers must be prepared with the skills to teach students to survive in the world from the moment they wake up in the morning until they go to bed at night. When we deal with the severely retarded, the behavioral deficits and developmental needs of each person rather than the dictates of the school board, become the curriculum.

In addition to acquiring expertise in goal selection or curriculum, a well-trained effective teacher must be taught the other critical components of the behavioral teaching format: assessing behavior, keeping records, altering programs in response to student performance, and programming for the generalization and maintenance of the learning acquired. Training of this kind is not readily acquired through one-day institutes, short workshops, or presentations by experts on understanding the nature of retardation. It is best achieved through clinical procedures, i.e., through demonstrations and practice under supervision with ample guidance and feedback. "Skill to do comes of doing" (Emerson).

As for teacher commitment, it has to begin with the selection of candidates who have an interest in teaching the severely and profoundly retarded (and who see this area as a challenge) and then arrange training and working conditions to maintain and heighten this interest and commitment. This requirement brings us to the next point in the implementation: the need for administrative support.

Administrative Support

Administrators - principals, superintendents, supervisors and the like - play a critical role in the success or failure of this kind of program. Not only are they the ones who select the teachers with the proper training, experience and motivation, but they are also the ones who must see to it that the teacher's efforts are adequately supported. The special teacher will have to make unusual requests (within the context of the operation of the typical school) in terms of assistance, special training devices, procedures, and funds for special materials. These requests will have to be met if the teacher is to do a creditable job. For example, an additional assistant may not be attainable because of a limited budget but might be recruited from the ranks of well qualified senior citizens. Similarly, alterations of the physical plan (to provide a time-out room or additional toilet facilities) may be somewhat irregular but absolutely necessary if the teacher is to expect optimal learning by severely retarded students.

Administrative support also consists of showing the teacher in no uncertain terms that her efforts are well appreciated by giving her positive reinforcement for her achievements (even the little ones) and understanding sympathy for her reactions to frustrations, disappointments, and hurts that "come with the territory" (negative reinforcement).

Administrative support has still other facets. One consists of seeing to it that the teacher has opportunities to improve her techniques by making it possible for her to be in contact periodically with those on the frontiers of revisions and new developments. This, of course, is the business of maintaining quality control of teaching through updating practices on the basis of findings from applied behavior research and from selected demonstration projects. The final point with regard to administrative support pertains to perpetuating the program. Many times effective behavior programs are established and then disappear because quality control is not maintained (backsliding) or because of personnel turnover. Because extra time and effort are required to find interested teachers who are willing to learn and put into effect new teaching procedures, it is relatively easy to allow the program to drift back to non-functional practices. There is no question but that behavioral program is beneficial to the retarded individual and his parents; whatever extra effort, time, and funding are necessary to establish and maintain such a program are well repaid by the results.

Active Parent Participation

We turn now to the last aspect of implementation: active parent participation. Active parent participation (with the accent on the "active") is more than an ingredient in this approach to teaching the severely and profoundly retarded individual;

it is a must. It is imperative because if the parents do not actively participate in the program there is little hope that the behaviors acquired in the classroom (walking is an exception) will generalize and be maintained. This inference follows from the fact that most of the behaviors a severely and profoundly retarded child learns in the classroom are related directly to his here-and-now natural environment which consists of interactions with the functional properties of physical objects and the members of his family. On the other hand, most of the behaviors a normal child learns in the classroom are generalized and maintained both in the home and in the community. The latter becomes progressively more influential for the normal child as he grows older.

As we noted in the discussion of the basic applied behavior analysis format, the active participation of parents also provides an opportunity for the teacher to influence the parents' child-rearing practices first with respect to tasks taught in the special class and then to tasks not taught in school. It is hoped that what they learn will also generalize to their practices with the other children in the family.

Summary

The application of behavioral principles has great potential as a basic for the teaching and training of the severely and profoundly retarded individual because of its focus on the interactions between a unique individual and functionally defined, observable, environmental events and because its concepts and principles are experimentally based. To keep this approach moving ahead, there is need for a sound educational program directed toward both the public at large and the educational community to abate the unfavorable press which is based on misunderstandings. Effective public education should include the kind of information that will discourage people from using the technique without adequate training and supervision, and encourage those that are trained to follow the basic format, and keep up to date on extensions, refinements, and innovations.

Finally, the behavior analysis approach needs support in implementing the format through adequate and appropriate teacher training and vigorous backing by administrators and parents.

The application of behavior principles to the teaching of retarded children is not another educational fad and those who stand around patiently waiting for it to pass will be disappointed. Since it is the end-product of 50 years of experimental research and theory construction, it is likely that with continued support of basic and applied research, it will become even more effective. The only justification for developing a cogent educational technology is the enhancement of the lives of children, all children, and hence of all mankind.

REFERENCES

Bijou, S. W. A functional analysis of retarded development. In N. R. Ellis (Ed.), *International review of research in mental retardation*. Vol. 1. New York: Academic Press, 1966, Pp. 1-19.

Conont, E. H. *Teacher and paraprofessional work productivity, a public school cost-effectiveness study*. Lexington, Massachusetts: D. C. Heath, 1973.

Drash, P. W. & Freeman, B. J. *Behavior modification, behavior therapy, and operant conditioning: An historical survey and bibliography of books in print 1900-1972*. Behavioral Information & Technology, Baltimore, Maryland, 1973. (5407 East Drive, Baltimore, Maryland)

Fuller, P. R. Operant conditioning of a vegatative human organism. *American Journal of Psychology*, 1949, *62*, 587-590.

Hobbs, N. *The futures of children*. San Francisco, California: Jossey-Bass, 1974.

Hoon, P. W. & Lindsley, O. R. A comparison of behavior and traditional therapy publication activity. *American Psychologist*, 1974, *29*, 694-697.

Johnson, G. O. Special education for the mentally handicapped - A paradox. *Exceptional Children*, 1962, *29*, 62-69.

Jones, M. C. The elimination of children's fears. *Journal of Experimental Psychology*, 1924, *7*, 382-390.

Kirk, S. A. Behavioral research: What is it - what it can mean. *Mental Retardation News*, 1971, *20*(1), 7.

Shearer, M. S. & Shearer, D. E. The Portage Project: A model for early childhood education. *Exceptional Children*, 1972, *38*, 210-217.

Skinner, B. F. *About behaviorism*. New York: Knopf, 1974.

Watson, J. B. & Rayner, R. A. Conditioned emotional reactions. *Journal of Experimental Psychology*, 1920, *3*, 1-4.

THE SEVERELY HANDICAPPED CHILD IN THE PUBLIC SCHOOL - WHAT WE HAVE TO DO!

by

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Some of the more recent developments in the area of the severely/profoundly handicapped are a direct result of the goals of the Bureau of Education for the Handicapped (BEH) of the U. S. Office of Education. BEH is the principal agency within the U. S. Office of Education for developing, administering and carrying out programs and projects relating to the education and training of the handicapped. Included in these duties are: (1) The preparation of professional and paraprofessional personnel, (2) research into needs and processes of learning for the handicapped and (3) the development of educational technology for this population.

The primary goal of the BEH is to encourage the provision of quality instruction for all handicapped children. To serve this end, the Bureau has outlined a statement of six goals toward which its efforts are being directed. These six goals include:

I. National Commitment - to assure that every handicapped child is receiving an appropriately designed education by 1980.

II. Increased Services - to assist states in providing appropriate educational services to at least 75% of the handicapped by 1977.

III. Early Childhood Education - to secure the enrollment of at least 750,000 (75%) pre-school age handicapped children in federal, state and local educational and day care programs.

IV. Career Education - to assure that by the year 1977, every handicapped child who leaves school has had career and vocational education training that is relevant to the job market, meaningful to his career aspirations and realistic to his fullest potential.

V. Severely Handicapped - to provide quality educational services for even the most severely handicapped child.

VI. Personnel Development - to assure that by 1980, all handicapped children served in the schools have a trained teacher who is competent in the skills required to aid the child in reaching his/her full potential.

What it will take and what we will have to do to provide quality educational services for even the most severely handicapped child and, specifically what is happening in the area of personnel preparation for the severely handicapped, are the principal thrusts of this article.

About 2 years ago, Phil Burke, Branch Chief, Division of Personnel Preparation, BEH and Bob York, Assistant Professor, University of Vermont and this writer, published a paper entitled "Considerations for Serving the Severely Handicapped in the Public Schools."* This article emphasized that when large numbers of severely handicapped youngsters enroll in the school over a brief period of time the special education community will be confronted with problems and challenges never before anticipated. These problems and challenges will be (at least in degree, if not in cost) something which schools have never before confronted on such a large scale. After having the opportunity to review what has happened in Pennsylvania, the District of Columbia, and now in Maryland, this writer has the unfortunate duty to report that our concerns were far too simplistic and naive.

However, before continuing to indicate some of the goals to which we must attend, let me share with you several personal assumptions upon which I am basing my remarks:

1. The severely/profoundly handicapped child can and should be served in the public school sector.

2. Parents can and should be partners in both educational decision making and programming. To this end, special educators and other professionals should forever stop using the phrase "parent training".

3. Severely/profoundly handicapped children are capable of learning beyond our current expectations.

4. Severely and profoundly handicapped children can be integrated into many regular public school activities.

5. Our mental set about the delivery of services for severely/profoundly handicapped children may no longer be viable. Such service delivery models as the continuum, the cascade, etc., are essentially operating from a premise that may not be beneficial to the severely handicapped child.

This writer's propositions for the future probably hold a certain number of uncomfortable and antagonizing thoughts for many. However, as Ed Martin, Deputy Commissioner, U. S. Office of Education, remarked recently regarding early childhood programs, "The needs for coherent public policy must outweigh the provincial concerns of special interest groups." We, in the Special Education community, have been among the first to request input from parents. But in all honesty, have we ever asked for program outputs, or for participation that could be described as program oriented? We, in the professional community, must extend to parents a sincere and functional partnership in both decision making and programming. When we do not extend it, parents must demand such a role. Only when this partnership is functional are we going to be ultimately successful. Parents are the key to expanding successful intervention strategies for severely involved children.

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* Sontag, E., Burke, P., & York, R. Considerations for serving the severely handicapped in the public schools. Education and Training of the Mentally Retarded, 1973, 8(2), 20-26.

Another concept to be considered is the need for research specific to the needs of the severely/profoundly handicapped. Presented below is a practioneer's shopping list of research needs:

1. Research into the chemical control of seizures.

2. Relevant information on appropriate visual and audiological screening techniques. We have to find ways to determine how much the non-communicative severely/profoundly handicapped child can hear and see.

3. Significant information concerning the utilization of prosthetic devices for the severely/profoundly handicapped, such as typewriters and telecommunications apparatus for multiply-involved handicapped, electronic stimulators for limbs, etc.

This is just a sample of the practioneer's needs. Research is tremendously important, and our efforts must be coordinated. In view of the magnitude of the problem we face, there can be little time for duplication of effort. The information that we have now on how to teach these children is getting better, but is minimally adequate.

Also, institutions of higher education (IHE) must reconceptualize their role from that of a predominantly pre-service delivery system to one that puts equal emphasis upon in-service, staff development and pre-service training. This redefinition of roles is needed if IHE's are going to provide adequate assistance to efforts for the provision of quality instruction for all handicapped children. Personnel preparation is one major component in the provision of services. Since this is a common responsibility, it is reasonable to expect that representatives in the various training sectors develop and coordinate cooperative manpower planning activities. This coordination can be developed through cooperative efforts which include a dedication to effective communication by all participants. The Division of Personnel Preparation has convened meetings this past year, and is currently in the process of convening meetings this fall. We are strongly urging IHE's to meet with the State Education Agencies and develop cooperative manpower plans for their respective states. It is also evident that BEH, in cooperation with IHE's, needs to develop better responsiveness to specific geographic catchment and low incidence areas. IHE's must begin to develop better in-service training delivery systems. They must accept responsibility for retraining of the professional already employed. This training should take place as close to the professional's place of employment as possible. IHE's should attempt to move pre-training into the schools. This is particularly true in the area of the severely/profoundly handicapped. We also have to begin to base training delivery systems on the assumptions that training is not the sole prerogative of the IHE and that local and state education agencies have and will continue to have major responsibilities in both pre-service and in-service training. Increasingly, we find that service agencies are developing not only extensive in-service training programs but are actively developing pre-service programs. In geographic areas where great pre-service training needs still exist, service programs are developing pre-service training programs when IHE's have failed to meet those training needs. As the Division of Personnel Preparation undertakes the initiative in convening cooperative planning meetings within states, it is hoped that one result will be a stronger ability to meet the training needs in all areas of the states.

Research has extended the age for intervention downward so that mandatory procedures should be established for assessment of the possibly handicapped child at birth or very soon thereafter. These procedures should include an interdisciplinary assessment in a community-based center. As a follow-up to the assessment and identification of the severely/profoundly handicapped child, mandatory infant learning programs, based on current demonstration center programs, should be available to begin developmental intervention for the child.

One of the greatest difficulties that parents of handicapped children encounter is the location of appropriate services. In the past, BEH, as well as other agencies and organizations, received hundreds of inquiries a week from parents who were trying to locate services. Several years ago, under a small grant from the federal government, a computerized listing of all service programs in the country was made. The project became known as "Closer Look." Under a continuing advertising campaign using newspapers, radio, television, magazines, and other communication media, parents are being urged to write to "Project Closer Look" in Washington, D.C., if they think their child may need specialized services. Parents are then sent a list of services available in their geographic area and suggested procedures for contacting the appropriate agency(s). However, making parents aware of available programs is but the first step.

Mandatorily established infant learning programs based on current demonstration projects should be available to begin developmental intervention for the severely handicapped child. Responsible service to the handicapped demands the extension of the intervention age upward for continuous programs at each developmental stage. The individual cannot be abandoned at age 21 or 25. The coordination of all interdisciplinary services must continue as we deal with the realities of today's world (i.e., the employment rate, the rising cost of living, the unavailability of housing, the fuel shortage), and with the implications of such realities for working with the severely and profoundly handicapped. There must be a process for systematic follow-up so that no individual gets lost at any point during his or her lifetime.

Severely handicapped children can and should be served in integrated settings from birth. At the very least, we can request that self-contained classes for the severely handicapped child be located in regular public school buildings. In addition, I think we can also expect integration of these children into some school activities. Several years ago, we were faced with a similar situation concerning the integration of moderately retarded children into a regular school building. Integration typically began in association with lunchroom programs. We next expanded the integration into physical education, recreation, recess and, ultimately into academic groups in the kindergarten, first and second grades. The major problem we continue to face regarding integration of the severely handicapped child into public school programs involves our own attitudes and those attitudes we convey to the regular educator. Children should not be segregated from society by using such criteria as number of fingers or limbs or IQ score. We should expect integration of severely involved children into regular public schools. We should expect integration into such activities as art, music, physical education, swimming, lunch, playground, etc. The benefits to all of us are immeasurable. Through such integration all children become more tolerant of individual differences and are better prepared for the realities of a hetrogeneous world.

We must conceptualize programming for the severely and profoundly handicapped child from ages 0 to 21 and beyond. Obviously, this is not going to be the sole responsibility of the special educator. Many services and diciplines, which have not had a functional dialogue in the past, must get together and communicate.

Other important considerations for the future directions of comprehensive demonstration programs include:

1. Deinstitutionalization and its ever-widening effect upon parents, communities and personnel preparation programs.
2. Economic considerations - the need for a strong advocate for funding of education programs for the severely/profoundly handicapped during this time of economic cut-backs in federal and state funding.
3. Implications resulting from the definition of specific needs for administrative organization of special education programs for the severely/profoundly handicapped in such areas as the inner city, the suburbs and rural areas.
4. Identification of national leaders who have demonstrated their expertise by association with competent demonstration programs and who will be available to new and emerging programs as consultants to help facilitate the replication of successful programs.
5. Establishment of a central facility that will be responsible for expedient dissemination of information.

There is an amusing Russian fable about a comic troika which consists of a swan, a crab and a fish. These three were designated to pull a cart. Of course, each pulled in a different direction; i.e., the swan to the air, the fish to the sea, and the crab backwards. The final line of the fable concludes:

> "Now which of them is right,
> Which wrong concerns us not,
> The cart is still upon the self same spot."

We cannot afford to sit upon the self same spot. We must work together to develop and to provide quality educational services for even the most severely handicapped child. If this goal is to be accomplished, professionals, parents and legislators must minimize differences and maximize agreements and similar objectives.

USING THE DEVELOPMENTAL APPROACH AS A BASIS FOR PLANNING AND SEQUENCING DIFFERENT KINDS OF CURRICULA FOR SEVERELY/PROFOUNDLY HANDICAPPED PERSONS*

by

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As debate increases about what to teach severely handicapped pupils, and as the demand increases for materials to use in teaching this population, teachers and administrators will become involved in many small, separate, local community efforts throughout the states for the purpose of developing curricula. If tradition is followed, there will be a large number of curricula developed. All will be different to some extent, based on differing sets of assumptions, and offering a variety of tasks and sequences.

If all of these efforts could be coordinated and a comprehensive plan established, it would be possible to write a developmental curriculum, one that could have a sound theoretical rationale and a common content base throughout the many levels of development. Such a curriculum could, for some extended time, be in a state of continuous development, being modified and refined by information from carefully maintained records of the performance of many severely handicapped children. Eventually, a well refined and reasonably complete curriculum could evolve. It could include the following skill areas: pre-academic and academic, leisure time, social interaction, self-help, communication, motor, and pre-vocational and vocational. It could arrange sequenced behaviors and tasks in very small increments of difficulty so the pupil can progress to more complex tasks or skills that are developmentally more advanced.

The curriculum should not be considered completed, fixed, or finished and bound. Rather, it should be open-ended, always being developed further and refined; always modified on the basis of performance data. Through this process we should have responsible, dynamic guidelines for teaching.

A valuable by-product of such a curriculum might be a direct performance measurement scale. Since each behavior and task is observable, a "go-no-go" check for each could accompany the curriculum. This check would give regular evaluations of the child's progress in the teaching program. While there is general acceptance of specified behavioral criteria and of formal intervention programs designed to teach a child to proceed through a sequence of behaviors, there is no such general agreement about selecting the content of curricula and the sequence to use in arranging instructional programs.

Back to the ideal curriculum. If anyone should pursue this idea seriously, it would be necessary to arrive at a sound theoretical basis for selecting what to teach the severely handicapped and in what sequence. A basis common to many teachers of the severely and profoundly handicapped as they plan curricula is an infant and child developmental basis. The developmental approach to curricular experience has several advantages, a few of which are the following:

1. The developmental approach serves as a uniform basis for arranging experiences at least for the first 72 months of development. We believe that once a child has reached a developmental age of 72 months, he can no longer be considered severely handicapped. That is, a person with the level of skills development expected of the normal six year old - the mobility, cognitive, social, self-help, and communication skills - has a fairly wide range of capabilities and many other options for curriculum experiences are available to him.

2. The developmental approach is based upon an observed record of many children from many cultures developing from birth to early childhood; therefore, arranged experiences and interventions on the basis of the sequence typically followed by developing children have a certain logic.

3. The developmental approach serves as the basis for treatment by several other management disciplines, such as child development specialists, communication disorders specialists, nurses, occupational therapists, physical therapists, and pediatricians. This, of course, increases communication among the disciplines and provides a common base among disciplines for measuring the child's progress.

A Content Survey of Selected Curricula

In order to provide a very brief but general look at behaviors included in curricula for severely handicapped children that are in use throughout the nation, we have selected a few very good curricula to review. We will include the age range of the child for whom the curriculum is provided and the content by areas wherever these have been offered by the authors. We have also included the first and last item in each skill area. This will give an idea of the nature of the items and the range of tasks available in each area.

The Portage Guide to Early Education (Shearer, 1972) was developed primarily to use as a guide in teaching handicapped children in early childhood education programs and designed for those children whose mental ages are birth to five years. It has been fairly widely replicated throughout one-half of the United States. The Portage Guide to Early Education contains 1) a check list of behaviors and 2) a card file containing curriculum ideas. These materials were developed by personnel in the Portage Project which was funded by the Bureau of Education for the Handicapped and was one of the seventy First Chance Projects for Preschool Handicapped Children. It consists of five developmental areas, each area color coded: 1) Cognitive, 2) Motor, 3) Language, 4) Self-help, and 5) Socialization. Each of the 420 cards in the card file provides information about the activity suggested: appropriate age of the user, behavioral title, behavioral description, and the suggested activities and materials. For example, in the Cognitive section, Card No. 1, the behavioral title is "Visually follows object past midline," and the behavioral description is "The child will follow a brightly colored object with his eyes from the side of the face past the center of the face." The end of the sequence in the Cognitive area is Card No. 86, which includes the title, "place object on direction" and the behavioral description, "Child will place objects - up, down, in, on, under, over, beside (next to), on direction." In the Motor area, the first card's title is "Sucks and swallows liquid foods" with the same behavioral description. The last card, No. 97, involves the task, "Copies diamond shapes," and the behavioral description is "The child will copy a diamond shape made by an adult on paper." In the Language area the first task is "Undifferentiated cry," and the behavioral description, "The child will cry as a reflex action (i.e., birth cry, startle reflex, sudden change in position)." The Language sequence ends with "Speech is understandable," and the behavioral description is "The child's speech will be understood clearly by anyone, with minor mis-articulations that do not interfere with being understood (i.e., 'yeth' for 'yes')." In the Self-help area the first task is "Open mouth for bottle or breast" and the behavioral description is "The child will open mouth to receive nipple." The last task (Card No. 80) in Self-help is "Goes about neighborhood without constant supervision" and the behavioral description is "The child will go about his immediate neighborhood unsupervised. May be restricted as to areas and boundaries and time he is allowed to be gone." In the Socialization area, the first task is "Responds to another person" and the behavioral description is "The child will follow a moving person with his eyes, increase body activity or turn his head in response to voices or to movement of people around him." The final task in Socialization is "Responds to music" and the behavioral description is "The child will demonstrate a social sharing of music." The directions of The Portage Guide to Early Education do not specify the basis for selecting the specific content or the sequences of a task; however, it seems obvious from looking at the tasks that the content is quite compatible with typical child development.

The Right-to-Education Child (A Curriculum for the Severely and Profoundly Mentally Retarded) (Myers, Sinco & Stalma, 1973). This curriculum for the severely/profoundly mentally retarded is found in a book published by Charles C. Thomas; it is fundamentally based on behavioral objectives and is competency based, with a competency checklist included in each instructional unit. It is divided into four curriculum units: Sensory Development, Motor Development, Self-care Development (with sub-units on self-feeding and drinking, washing and bathing, nasal hygiene, oral hygiene, toilet training, and dressing), and Language Readiness Development. Each unit includes an instructional objective; information about readiness for instruction, procedures, task evaluation; and materials and equipment lists. In the first unit, Sensory Development, the first instructional objective is "To direct the child's body in a variety of positions, in order to stimulate muscles and circulatory processes" and the last objective in that unit is "To stimulate the taste sense of the child." In the next unit, Motor Development, the first instructional objective is "To have the child move his head in the direction of sound stimulation" and the last instructional objective is "To have child begin to move up steps with assistance." There is a sub-unit, Specific Motor Activities for the Spastic and Athetoid Child. The first instructional objective here is "To bring the athetoid cerebral palsied child to a more stabilized posture" and the last instructional objective is "To develop head control in the spastic and athetoid child." In the third unit, Self-care Development, there are six sub-units - the first objective of the Self-Feeding and Drinking instructional sub-units is "To teach the child to take nourishment through a dropper feeding" and the last objective in this sub-unit is "To have child successfully cut food using a knife." In the next instructional sub-unit, Washing and Bathing, the first instructional objective is "To have child relax in bathtub of water" and the last is "To have the child wash and dry entire body independently." The third instructional sub-unit is Nasal Hygiene - the first instructional objective is "To have child become aware of the proper use of tissues by playing such games as 'this is the way we blow our nose'," and the last objective is "To have child care for nose independently." Under the fourth sub-unit, Oral Hygiene, the first instructional objective is "To have child become less fearful of toothbrush by playing games with it," and the last objective is "To have child brush his teeth independently." The first instructional objective under Toilet Training is "Child is dry for one to two hours permitting a toilet training schedule to be implemented," and the last objective is "To have child use toilet appropriately and independently." Under Dressing, the first objective is "To have child successfully pull sock off when it is just over his toes," and the last is "To have child button shirt independently." In the last unit, Unit IV, Language Readiness Development, the first objective is "To have child attend to adult when being spoken to" and the last is "To have child respond to simple verbal commands."

As in the review of the previous curriculum, it is difficult to determine the basis for the content or sequences. One can assume that it has been developed empirically. The only clue to the approach is included in the Introduction, which provides this rationale for using an adaptive approach: ". . . any classification system tends to lead to an oversimplification of problems that are complex and perplexing. Within each level there are wide differences of ability potentiality. For these reasons it is preferable to focus on the dimension of adaptive behavior which refers primarily to the effectiveness with which an individual copes with the natural and social demands of his environment." (p.3)

The Mid-Nebraska Mental Retardation Services have produced an excellent curriculum which includes the Basic Skills Screening Test and the Basic Skills Remediation Manual (Schalock, Ross & Ross, 1974). The manual and the screening test provide: 1) an objective screening test to evaluate each target behavior; 2) a developmentally sequenced list of target behaviors which, when remediated or present, combine to produce functional behavior; 3) specific teaching objectives, remediating techniques, and materials for each target behavior; and 4) a suggested movement cycle for each teaching objective. Both the screening test and the remediation manual include seven areas: Sensory-Motor Functioning, Visual Processing, Auditory Processing, Language, Symbolic Operations, Social-Emotional Development, and Work Skills. Each of the areas in the remediation manual includes the target behavior, teaching objective, remediation activities, materials, and movement cycles for the teaching objective.

In Sensory-Motor Functioning, the first target behavior is "Visual Fixation," and the teaching objective is "Holds eye steady while looking at a stable object for 15 seconds." The last target behavior is "Distinguish right from left," and the teaching objective is "Differentiates right from left hand and sides of body (and feet)." Under Visual Processing, the first target behavior is "Orientation toward the visual stimulus," and the teaching objective is "Orients eye toward a visual stimulus." The last target behavior in Visual Processing is "Visual association of pictures" with the same teaching objective. In Auditory Processing the first target objective is "Sound localization," and the teaching objective is "Locates direction of sound heard." The last target behavior is "Auditory association - relating spoken words," and the teaching objective is "Relates words to meaningful verbal concepts."

In Language, the first target behavior is "Understanding nouns," and the teaching objective is "Matches an object with a common noun heard." The last target behavior in Language is "Combining words to make phrases," and the teaching objective is "Uses verbal phrases in meaningful situations spontaneously."

The next area, Symbolic Operations, contains five sub-areas. Reading, the first, includes a range of behaviors from "Visual discrimination" (the target behavior) accompanied by "Visually distinguishes likenesses and differences in letters" (the teaching objective) to the last in this area of reading, "Comprehension" (target behavior and teaching objective). Printing or Writing (Sub-Area B) ranges from the target behavior, "Left to right progression" and the teaching objective, "Moves eyes and hands in a smooth left to right progression on pencil and paper tasks," to the last target behavior and teaching objective, "Writing letters without a model." Sub-Area C, Arithmetic, begins with "Visual discrimination" (target behavior) and "Visually distinguishes likenesses and differences in shape, size, numbers" (teaching objective), and concludes with "Money concepts - prerequisite counting and understanding the number symbol-object relationship." Concept Formation (Sub-Area D) ranges from "Visually discriminates likenesses and differences in color, size, shape, etc." (target behavior and teaching objective) to "Concrete association" (target behavior) and "Classifies objects" (teaching objective).

Under Problem Solving, the first target behavior is "Understanding the Problem" and the accompanying teaching objective is "Teacher presents different problems to the child." The last target behavior and teaching objective in this area is, "Choosing One Way to solve a problem."

In Social-Emotional Development, the first target behavior is "Body image" and the teaching objective is "Points to and/or names body parts." The last target behavior is "Leisure time," and the teaching objective is, "Experiences free time and free time activities during the instructional day, does solitary free time activities, and utilizes community resources for entertainment." The last category is Work Skills - the first target behavior and teaching objective is "Stays at work isolated station." The last target behavior is "Tool recognition and use" and the teaching objective is "Labels correctly and uses the following tools: Hammer, screw driver, pliers, saw, wrench, paint brush." Again, this curriculum does not specify the theoretical base for the content or the target behaviors and sequences. Each objective is behavioral and observable. Since each behavior is described by a movement cycle, and is accurately recorded and measured, measurement of progress throughout the curriculum is facilitated.

The Perceptual Motor Development Curriculum Guide (Ronayne, Wilkinson, Bogotay, Manculich, Sieber, & McDowell, 1974) is a highly cognitive approach which is not totally consistent with the developmental approach in that it places heavy emphasis on motor learning, perhaps even to the point of bias. One of the advantages of this curriculum, as specified in the beginning narrative, is that it will continue to be revised on the basis of experimentation. This curriculum includes eight skill areas: Body image, gross movement experiences, specific coordination skills, visual-motor perceptual training, auditory perceptual training, haptic perception, olfactory-gustatory perceptions, and perceptual integration-conceptualization. The curriculum includes specific objectives, experiences and activities, and resources. Remaining consistent with the other curricula reviewed, in the body image area the first objective is "To respond to self in mirror," and the final objective is "Writes, colors, paints, etc., using dominant hand." Under gross movement experiences, the first objective is "Rolls head to right and left," and the last objective is "Engages in rhythmic exercises following his own inner rhythm." The objectives under specific coordination skills range from "Focuses on stationary objects" to "Coordinates eye and hand movements efficiently for copying, writing and drawing." Visual-Motor Perceptual training begins with the objective "Matches an object to an identical object" and ends with "To identify an object when variations in color are present." Following is the auditory perceptual training section which begins with "Responds to loud sounds: gives startle response - increases or decreases activity" and ends with the final objective, "Distinguishes foreground from background sounds." Under haptic perception the first objective is "Shows awareness of stimulation" and the last is "Recalls haptic experience for self-protection." The olfactory-gustatory perception area follows with the first objective, "Experiments with numerous sensations of flavor" and the final objective "Recalls specific tastes and smells." In the final area, perceptual integration-conceptualization, the format for achieving the objectives is changed a bit and the teaching involves awareness, imitation, matching, discrimination, identification, organization (perception), integration (conceptualization), interpretation (reorganization), and transfer (generalization). The Perceptual Motor Development Curriculum, as indicated in the narrative parts of the curriculum, is really based on research and sensory stimulation and training by noted psycho-physiologists such as Hebb, Montessori, Seguin, Piaget, and others. The curriculum gives credit to Dr. Bryant Cratty's 1967 statement that, "The motor and intellectual abilities of more severely retarded children are more closely related than are various motor and intellectual measures of children with less severe mental impairment."

The Zero Reject Project Curriculum (Brown, Scheuerman, Cartwright & York, 1973) is directed by Louis Brown, University of Wisconsin, Madison, Wisconsin. This curriculum, interrelated with behavioral procedures, is entitled, "Design and implementation of an empirically based instructional program for young severely handicapped students: Toward the rejection of the exclusion principle." It was developed by several researchers observing and recording developmental sequences of handicapped children, using their behaviors as the basis for organizing the content and sequencing of the instructional tasks for these children. This is a curriculum designed more for children from five to ten years of age. It is an instructional program which embraces curriculum content and skills within the program, but follows the straightforward format of the other curricula reviewed. The programs include: 1) Basic Language Skills (direction following program, location concept, receptive language, and expressive language); 2) Reading Skills (initial sight word reading, color program, basic alphabet skills, and chart story program); 3) Math Skills (number discrimination and labeling, basic counting and quantity concept, and rudimentary math concepts including quantity and size); and, 4) Adjunctive Programs (pre-writing, shape discrimination and labeling, behavior management problems). We have reviewed this program and its curriculum because it shows with realistic optimism that severely handicapped pupils can respond to an academic curriculum. It has built in a number of instructional programs which have been developed empirically and used with a population of severely handicapped children. The data included provide the evidence to demonstrate that with precise intervention, severely handicapped children of school age can learn the rudiments of word recognition, concepts of quantity, and writing skills.

Systematic Instruction for Retarded Children: The Illinois Program (Chalfant and Silikovitz, 1972) is divided into four parts: 1) Teacher-parent guide; 2) Systematic language instruction; 3) Self-help instruction; and, 4) Motor performance and recreation instruction. This is the most comprehensive curriculum program that we have reviewed. Obviously three major areas of instruction - language, self-help, motor performance and recreation - are condensed from the other curricula involving a greater number of areas. The language section is developed in ten stages consisting of a) good sitting, b) quiet sitting, c) good hands, d) good legs, e) good sitting with good hands and good legs, f) good looking, g) good listening, h) introduction of another child to the teaching situation, i) introduction of three other children to the teaching situation, and j) introduction of potentially distracting materials. This curriculum is organized into lesson plans which include teaching procedures, reinforcement procedures, and correction procedures. A typical objective in the language area is "To teach subject, on hearing his own name, to respond by looking at the speaker." Another plan near the end of the language instruction area is "To teach subject to perform two acts in sequence when given multiple commands joined by 'and'." The Self-help curriculum consists of four programs; dressing, dining, toilet training and grooming. A typical objective in the beginning sequence of the dressing program is "Subject takes off sock upon request." At the end of the program, objectives progress to "Subject ties his shoelace on request." In the dining program the objectives include teaching good eating behaviors and proper use of utensils. In the grooming program the teaching objectives are tooth brushing, hand washing, hair brushing and nose blowing. For example, with tooth brushing, the subject is requested to first touch his teeth and then graduates to "brushing teeth on request." The toilet training program is organized around three areas: pre-training observation and record keeping, developing and implementing a toilet training schedule, and developing the child's self-control. Included in the last section of the curriculum, Motor performance and recreation instruction, a typical beginning objective is "Child walks on verbal command in two situations" and, at the end of the section, a typical objective is, "The child cuts paper of average resistance on a straight line," on command, "Cut the paper on the line." This instructional program was selected for review because it includes a teacher-parent guide, which is very interesting and helpful for the teacher. However, the curriculum within this program, like the others reviewed, does not hint at the basis from which the content was drawn or the way in which the tasks were sequenced.

The Washington State Cooperative Curriculum Project (WSCC, Edgar, Sulzbacher, Swift, Harper, Alexander & McCormick, 1975) is a computerized tracking system of sequenced skills with criterion tests. The WSCC is designed to be teacher administered and can be used both to assess handicapped children and provide ongoing evaluation data. The assessment data can be used to determine initial program placement for handicapped children as well as to establish specific individual objectives. The ongoing data provide the teacher with information which can be used to make program modifications. School administrators can use the data to monitor individual as well as total class progress. The language of the WSCC facilitates communication between teachers and school districts. Additionally, the data from the computer can be used to scale the curricular objectives in empirical learning sequences.

The curriculum items consist of two parts: Objective Statements and Criteria Tests. The Objective Statements (OS) are a catalog of student performances in sixteen instructional areas. These OS's provide an evaluation of the student's repertoire of skills and behaviors and are presented in a format that (a) facilitates communication to all those concerned with the student and (b) provides a framework for the teacher's sequencing of instruction. Criteria Tests (CT) are the second part of the curriculum, providing (a) the operational definitions of the behaviors listed in the Objective Statements (OS) and (b) specifying the standards for assessment.

Currently, there are over 1500 Criteria Tests which have been field-tested (with a reliability of over 85%) with an additional 1000 Criteria Tests in development.

This curricular system was designed to present an orderly sequence of precisely defined skills which would not only provide a means for individual student programming but also allow pupil progress data to be easily communicated among teachers and administrators. Of primary significance is the fact that the project should provide a model for teacher training and accountability, rapid curriculum modification and improvement through feedback from pupil progress data, and ongoing analysis of teaching elements. It is expected that this system will provide a data base for cooperative programming as an individual student moves through state institutions, group homes, and public schools.

Overview. The point in creating any curriculum is to enable children to develop as fully as they can. The issue we think worth raising is that if there is no discernible basis for selecting the content of any given curriculum, one must assume that anything might serve as a resource for such content. It is our belief that one must select those materials that lead to crucial responses and skills. Until there is a justification for selecting content that is more compelling than that, we believe that the appropriate course to take is to find out where a child is performing in relation to typical developmental sequences insofar as those crucial skills are concerned, and to begin programming from there. We believe, too, that using normal developmental patterns as the basis for assessment and programming yields a basis for developing a very wide variety of curricula that can be used with severely and profoundly handicapped children. In the search for uniform procedures to use with this population, such a basis - applicable to potentially any curriculum - would do a great deal to improve instruction of severely handicapped children.

Although our review is by no means complete, it has included a fairly representative sample of the behaviors included in curricula available for guiding the teaching of severely and profoundly handicapped children. While the content of these curricula was drawn from functional sources of information representing practical skills and facts for children to acquire, the bases for these curricula, whether theoretical or empirical, were not included in the material we reviewed. All curricula seemed to include essential behaviors which had either a developmental pattern or sequences based on task analyses. All but one curriculum reviewed used behavioral approaches implementing the curriculum. Essentially, specific objective procedures were employed to implement the objectives and there was some way of realizing when the child had reached criterion throughout.

The Need for Uniform Guidelines

It was difficult to discern from the selected curricula any common base or rationale for the skills and facts we expect severely handicapped children to have. Yet the severely handicapped do represent a group of children with extreme response deficits in almost all areas of performance. It is obvious that we do need guidelines for selecting the content we should teach. Certainly we cannot afford to teach irrelevant behaviors. Using typical infant and child development as a guide for selecting target behaviors and sequences offers the advantages mentioned earlier. It is crucial that the teacher of severely handicapped children have an excellent knowledge of normal developmental patterns. Without such knowledge, it is extremely difficult to determine where a given child is functioning. While the severely handicapped child may be expected to have many deficit areas, through knowledge of normal development the teacher will be able to identify those behaviors in which the child may demonstrate some approximation toward normal growth patterns. It is not uncommon to find extremely uneven development across areas in the severely handicapped youngster. Therefore, identifying areas of potential strength as well as those in which performance is extremely deficient has tremendous implications for all programming efforts. For those areas in which the child is found to be extremely deficient, knowledge of normal development is even more critical; without such knowledge, it is extremely difficult to identify the behaviors which should become the focus for educational objectives and programming.

Problems and Needs

There is fairly universal agreement about the sequence in which various skills appear in the developing child; a review of the developmental checklists and sequential inventories that are currently available shows that oftentimes the identical skills listed as appearing in a child's repertoire at a given age are included in the majority of comparable scales. However, skills or abilities are often described in ambiguous terms which offer teachers little help when they are confronted with a need to evaluate a given child's performance. Since the sequences available are the result of fairly comprehensive cross-sectional studies of large populations, and since so many of these scales exist and are in agreement about developmental sequences, there seemed little need to sequence, once again, developmental "milestones." However, there did seem to be some need to translate the descriptors offered in available scales into unambiguous, measurable terms that could be of practical classroom value to teachers.

There also exists a need to offer a sequence which follows a single skill as it develops in a child's performance repertoire over time; while a developmental psychologist, for example, might be interested in a list of all the skills a child possesses at one month or one year of age, a teacher working on developing one skill at a time in a classroom setting would find a different sort of format more useful. In order to find the next step in the sequence of development for each particular behavior in available lists, one must scan other long lists of behavior for each of the many age groups considered. For example, a teacher who wished to set up a program for a child deficient in communication skills, using currently available scales, would have to extract the particular communication skill of interest as it appeared at each age from a list of many other skills.

The Developmental Pinpoints have been compiled in an effort to provide information concerning major developmental areas, as well as the pattern of development of discrete skills within each area. The complete sequence may be found in a forthcoming book, Teaching Severely/Profoundly Handicapped Individuals, published by Grune and Stratton. A description of the way in which the sequence is organized is offered below.

Guidelines in the Organization of the Developmental Pinpoints

The term "pinpoint" is one that has been taken from a set of procedures called precision teaching (Haring, 1970; Lindsley, 1971). In precision teaching, the precise specification of behavior in measurable terms, or pinpointing, is an essential first step in program development. The use of the term is quite appropriate here, for the authors have made every effort, whenever possible, to clearly specify in measurable terms the behavior of interest. Our principal effort in this project, therefore, was to adapt the developmental skills listed in existing scales by making them specific enough to be useful in the classroom and by arranging them in a format which tracks each skill over time rather than following the chronological appearance of skill clusters.

As the term "pinpoint" refers to a measurable behavior, it follows then, that the emphasis throughout the listing would be upon that which is observable. It appeared highly incompatible, therefore, to include one area which appears in many developmental checklists consulted, the area of cognition. Our belief that description of observable behavior results in more useful programming for children led us to include various skills often placed in the "cognition" category under fine motor or gross motor skills. Previous scales have provided some precedent for this decision, since often a skill reported by one sequence under the heading of cognition occurred under fine motor skills or gross motor skills in other researchers' lists.

Format of the Developmental Pinpoints

Throughout the listings in each major developmental area, "large N" studies, screening batteries, and developmental checklists are cited. Generally, the pinpoints have been compiled from a standard group of sources. For some pinpoints, rather general agreement has been noted concerning the age of occurrence, while for others there may be several months' discrepancy between sources. For those few areas in which the standard pool of sources offered few pinpoints, other "large N" studies were consulted for additional information.

Before each of the major pinpoint listings, the authors have provided an introductory section. These discussions are designed to provide a brief background regarding a few of the major concerns confronting an educator attempting to program in that particular area.

Suggestions for Classroom Implementation

These pinpoints provide an essential first step in program development. As the teacher views the large set of pinpoints provided within the sequence, it is important to be aware that the authors are not implying that the severely handicapped youngster develops in this way. Obviously, there have been many deviations from the normal course of development for these youngsters. While there remain many unanswered questions about the particular course of development for each individual included in this population, there are considerable data upon which guidelines for normal development have been based. This information has important implications for programs for severely handicapped children and cannot be ignored.

The total Developmental Sequence may provide information useful in forming a "quickie" overview of developmental sequences in general. Rather than devoting hours to seeking out information concerning specific skill sequences, this listing can provide ready reference material to guide the classroom teacher.

For those teachers seeking to provide youngsters with a well-rounded curriculum, the Developmental Pinpoints may be of special interest. Comparing his or her own classroom objectives to all developmental areas presented, the teacher may note his or her heavy emphasis upon the fine motor and self-help skills, for example, but insufficient emphasis in the area of communication. Through a more careful scrutiny of the communication pinpoints, new program objectives may be specified.

It must be emphasized once again that pinpointing is a first step in the development of programs. Through careful pinpointing, the teacher may begin to formulate both short and long term objectives. When establishing meaningful objectives, the teacher will want to utilize the pinpoints listed in assessing the child's behavior. Careful examination of the pinpoint sequences shown will suggest to the teacher ways in which to proceed in assessing behavior. For each sequence of behavior listed, the teacher would want to consider the terminal behavior first. If the child were able to perform the terminal behavior, there would be no need to further examine this skill sequence. If, on the other hand, the child is unable to perform the terminal behavior, the teacher will want to assess whether he has the behavior listed one step earlier in the sequence. If the answer is no, the teacher proceeds to assess other items listed in the sequence to identify which of the behaviors listed the child might already have. Whenever possible, the teacher will want to start programming with the closest approximation to the terminal behavior. Certainly the teacher would hesitate to begin instruction in a given area at a developmental level beyond that indicated by the child's performance. Using the procedures listed, then, the Developmental Pinpoints can become the basis for an assessment sequence and the subsequent establishment of educational objectives.

Pre-academic Area

Certain readers may question the inclusion of a pre-academic section in a set of pinpoints designed primarily for use by teachers of the severely handicapped. These readers may argue that individuals who demonstrate readiness for the academic areas would no longer be considered severely handicapped. It is precisely for this reason that a section concerning academic readiness is included in the Developmental Pinpoints. Through giving a child the opportunity to pursue maximum growth in each major developmental area as he becomes ready for such experiences, it may be possible to help him to rid himself of his previously assigned label.

For the teacher of the severely handicapped, then, the issue of academic readiness assumes a special importance. "When might I introduce some initial instruction?" "How will I know that the child is ready?" "What kinds of readiness experiences should I provide?" These are but a few of the many questions teachers ask as they consider some of the youngsters in their classrooms.

Pre-reading is one of the major areas considered in this section. Pre-reading pinpoints are grouped into the following categories:

I. Establishes book and story preferences

II. Performs movements in relation to books and pictures

III. Says words in relation to books and stories

Pre-writing pinpoints are also offered in this section. While the teacher may find it necessary to substitute other modes of responding for some severely handicapped youngsters, writing, for those with certain readiness skills, may provide the basis for activity in other academic areas. Handwriting pinpoints are grouped into the following categories:

I. Shows hand preference

- II. Holds writing implements
    - A. Holds with fist
    - B. Holds with fingers
- III. Makes marks
    - A. Scribbles
    - B. Makes controlled strokes
    - C. Writes letters
    - D. Writes numbers

Pre-math is another of the major areas considered in this section. Here pinpoints for the following categories are considered:

- I. Sorts objects using form and discrimination vocabulary
- II. Counts rotely (says numbers without reference to objects)
    - A. Repeats digits, 1-10
    - B. Repeats digits beyond 10
- III. Performs cardination tasks
    - A. Forms 1:1 correspondence
    - B. Counts rationally
        - 1. Counts fixed, ordered sets of objects
        - 2. Counts movable objects
        - 3. Counts fixed, unordered sets of objects
        - 4. Identifies, among several sets, the set which has a stated number of objects
        - 5. Counts out a specified subset from a larger set of objects
    - C. Compares set size (after pairing objects, such as chips of 2 colors)
        - 1. Identifies set with more
        - 2. Identifies set with less
        - 3. Compares sets of same size
- IV. Performs ordination tasks
    - A. Places concrete objects in order, shortest to tallest, smallest to largest, etc.
    - B. Orders semi-abstract objects
    - C. Begins ordering sets according to size
- V. Identifies numerals
    - A. Matches numerals

- B. Identifies numbers when named
- C. Names numerals
- D. Matches numerals with sets
- E. Seriates numerals
- F. Provides missing numerals
- G. Compares numerals (more, less)
- H. Writes numerals 1-5

VI. Uses numbers in related math areas

- A. Money
- B. Time
- C. Calendar
- D. Ruler
- E. Thermometer
- F. Geometric shapes
- G. Fractions

VII. Uses numbers in number stories

Leisure Time Area

The utilization of free time is a major concern for all individuals in today's rapidly changing world; however, it should be considered an area of special concern for the handicapped population. While there may be some activities to occupy the individual's day, there will still remain many hours to be spent outside an organized social or work situation. The problem then becomes: does this individual have any way in which to utilize his or her extra hours? Unfortunately, for too many, the solution to this problem will be the one-eyed monster known as the television. For hours upon end many of the children currently enrolled in our nation's special education programs may sit staring at this one option for leisure time activity. To some, it has become the only option available.

This section of the Developmental Pinpoints is offered in the hope of raising some questions about a crucial area which cannot be ignored for a group who will have a great deal of leisure time. It is hoped that as curriculum guides and instructional materials are developed for the severely handicapped, this area will receive the attention it merits.

The term leisure time does suggest that the individual will spend his or her time in a way he or she finds enjoyable. Through observation, the teacher may discover that certain activities lend themselves to this utilization far more easily than those offered in this section. However, because both music and arts and crafts are generally considered as major components within the category of leisure time activities, they were selected for presentation here.

I. Music
   A. Uses instruments
   B. Says or sings rhymes and songs
   C. Moves body to music
II. Arts and Crafts
   A. Paints strokes
   B. Folds paper
   C. Manipulates clay
   D. Uses scissors
   E. Draws figures

Social Interaction Area

In an extensive review of the literature concerning the successful integration of previously institutionalized individuals, Herbert Goldstein (1964) reports the frequent finding that ability to form "adequate personal relationships" and demonstrate appropriate social behavior is more important to steady employment and a position in the community than are other variables, such as academic potential.

The pinpoints offered in the social interaction section provide precise information concerning behaviors which make up that complex goal known as "social adjustment." The severely handicapped child may not be able to participate in all those activities which normally allow the child to explore his immediate surroundings, and, as he grows older, to engage in more complex interactions. We hope, however, that many of these behavioral pinpoints will be adapted by teachers of severely handicapped children in order to provide those children with a chance to acquire, first-hand, the skills which will make possible their successful participation in a world whose rapid technological and social change now demands major adjustments by everyone.

The categories into which social pinpoints are grouped include:

I. Establishes self-other discrimination
   A. Identifies self
   B. Identifies other
II. Establishes dependence, independence

- A. Maintains dependence
- B. Establishes independence

III. Establishes play activities

- A. Establishes manner and type of activity
    - 1. Manner of playing
        - a. Potentially positive aspects of play exhibited
        - b. Negative behaviors exhibited while playing
    - 2. Type of play activity
- B. Establishes interaction patterns, such as:
    - 1. Isolate play
    - 2. Parallel play
    - 3. Cooperative play

Self-help Area

For children in the severely handicapped population, self-help skills are behaviors of top educational priority. Without basic self-help skills, survival in any but the most sheltered environments will not be possible.

An outline describing the major categories into which pinpoints are grouped is provided below:

I. Eating

- A. Establishes general feeding schedule
- B. Makes body movements anticipating feeding
- C. Takes liquids
- D. Takes solids
    - 1. Establishes chewing behavior
    - 2. Takes finger food
    - 3. Uses implements

II. Dressing

- A. Establishes general dressing skills
    - 1. Dressing
    - 2. Undressing
- B. Puts on clothing
    - 1. Coat, dress, shirt
    - 2. Pants
    - 3. Socks

        4. Shoes
        5. Hats, mittens
    C. Manipulates zipper, buttons

III. Toileting

    A. Establishes general toileting schedule, habits
    B. Carries out toileting routine

IV. Personal grooming

    A. Washes self
    B. Dries self
    C. Brushes teeth
    D. Brushes hair

V. Keeping house in order

    A. Imitates activities
    B. Performs activities independently

VI. Manipulates household fixtures

    A. Turns handles
    B. Turns knobs

VII. Gives general information about self

Communication Area

Language is perhaps the most complex skill in the human behavioral repertoire. It is, certainly, an important prerequisite to integration of the severely handicapped individual within his community. The teacher attempting to remediate the language deficiencies of the severely handicapped child must, therefore, have precise knowledge of both the communication demands made by the child's culture or community and the child's position in relation to development of those communication skills. It is hoped that this list will provide a comprehensive and accurate description of language development from which the teacher can assess a child's skills and develop programs to meet developmental deficiencies.

The language pinpoints are divided into two major categories: those requiring receptive or decoding skills, and those requiring expressive or encoding behaviors. Successful performance in each category depends upon certain motor and sensory capabilities which may be substantially impaired in a severely handicapped population. Additional information regarding hearing acuity, motor capacities, and unusual sensitivity is, therefore, prerequisite to efficient use of the pinpoints for assessment and programming purposes.

Although receptive skills precede expressive skills in this sequence, there is some question as to whether reception precedes production in actual performance. Further research is needed in this area. The behaviors signifying communication reception which have been listed here fall, for the most part, into fine motor categories - such as move eyes, turn head, point. But Bernard Friedlander (1970), in a fascinating review of studies on receptive language development in infancy, suggests some novel ways of measuring early receptive abilities. Infant heart rate has provided one measure of the infant's discrimination of phonemic differences and sentence complexity. In a population such as the severely handicapped, in which fine motor responses may be very poorly developed, such a measure could prove extremely valuable.

While most descriptions of expressive language deal with verbalization, gesture has been included in this sequence. Although using speech as a vehicle for communication is a desirable goal, much information is communicated in everyday conversation by the use of facial and other gestures. Gesture can be developed as an effective communicative tool and represents a mode which must be explored when dealing with a population for whom intelligible verbal behavior may be a long range or impossible objective.

Presented here is a brief outline of the major pinpoints considered within the area of communication.

I. Receptive Language Pinpoints
    A. Responds to sounds
        1. Stops movement in response to sounds
        2. Stops whimpering in response to sounds
        3. Makes "startle" movement in response to sounds
        4. Turns toward source of sound
            a) Random sound
            b) Human voice
    B. Responds to verbal request (follows directions)
        1. Makes directional body movements
        2. Gives objects in response to request
        3. Points to objects, body parts, pictures
        4. Places objects in response to request
        5. Matches objects, pictures, colors in response to request

II. Expressive Language Pinpoints

- A. Non-verbal
    - 1. Makes eye contact
    - 2. Makes gestures
    - 3. Imitates motor activities
- B. Verbal
    - 1. Makes early sounds
        - a) Emits sounds with a potential relationship to specific situations
        - b) Vocalizes in relation to specific primary needs
    - 2. Establishes control of potential speech sounds
        - a) Phonological development
            - 1. Differentiated speech sounds
            - 2. Expanded control of intonation, pitch, stress
        - b) Imitates sounds
        - c) "Masters" consonants
    - 3. Says words
        - a) Says words in response to environmental cues
        - b) Says words in imitation, spontaneously
        - c) Says words labeling objects, pictures, colors (in response to verbal cue)
        - d) Says words imitatively in response to verbal cue
    - 4. Uses words in sentences - "grammar" rules
    - 5. Says phrases
        - a) Makes statements
        - b) Asks questions
        - c) Gives descriptions, definitions, or information about function

Motor Skills Area

While some might argue with the conclusions of Gesell (1952), Gesell and Amatruda (1947), and Kephart (1964), which identify motor activity as the "basis or origin" for all mental life and cognitive development, certainly the importance of motor development and coordination is evident in all major developmental areas. The severely handicapped child suffers some degree of fine or gross motor involvement which is likely to substantially impair his balance, posture, or movement. The inability to maintain balance or facilitate motion creates additional problems in other skill areas - communication, pre-academic, self-help, and social interaction - where developmental lags may already exist.

The motor pinpoints offered have been divided into two major areas, which include fine and gross motor skills. Within the Fine Motor sequence, pinpoints are arranged in two general categories: eye readiness, and movements involving hands. The sources consulted often described the sequential development of eye-hand coordination. While it is not always possible to determine whether a child actually "coordinates" eye and hand movements, the authors of this sequence have traced the development of numerous pinpoints prerequisite to tasks which might demand such coordination. Gross Motor pinpoints have been traced within three major movement types - those involving maintenance of static balance, those required to maintain dynamic balance within basic movement patterns, and those involved in maintaining general coordinated movement patterns. An outline of the sequence is provided here.

I. Fine Motor Pinpoints
    A. Eye readiness
        1. Moves eyes toward stationary objects, light source
        2. Moves eyes to follow moving objects
        3. Closes eyes in response to lights, objects
        4. Fixes gaze on object and reaches
    B. Movements involving hands
        1. General hand and wrist movement
            a) Hand movement
            b) Finger movement
            c) Wrist movement
        2. General hand movements in relation to objects
            a) Holds, grasps, and/or manipulates objects
            b) Releases objects
            c) Picks up objects
            d) Uses hands with beating motion
            e) Uses hands with raking motion
            f) Pulls objects
            g) Transfers objects from hand to hand
            h) Shakes objects
            i) Pushes objects

    - j) Pokes objects
    - k) Dumps objects
    - l) Closes boxes
    - m) Uses implements to obtain toys
    - n) Retrieves objects

II. Gross motor pinpoints

  A. Maintains static balance

    1. Supports head
    2. Thrusts, waves arms
    3. Thrusts legs
    4. Sits
    5. Stands
    6. Bends from waist
    7. Squats

  B. Maintains dynamic balance, using basic movement patterns

    1. Crawls and creeps
    2. Takes steps
    3. Rolls body
    4. Runs
    5. Climbs
    6. Jumps
    7. Hops
    8. Skips

  C. Maintains general coordinated movement patterns

    1. Reaches with arm
    2. Kicks
    3. Bounces
    4. Pushes objects; pulls objects
    5. Throws objects
    6. Rolls objects
    7. Kneels
    8. Carries objects
    9. Pedals
    10. Swings

11. Catches objects
12. Turns
13. Moves with pounding motion
14. Skates
15. Dances

Reinforcement Activities Area

While examining the many sources cited in the preceding sequences, a number of items were discovered which connoted choice, preference, or "purpose" on the part of the child. These pinpoints did not seem specific to any of the skill areas usually found in developmental sequences; they did, however, seem to suggest a developmental pattern of activity preference.

Through consideration of these activities, the teacher of the severely handicapped child can more easily discover those events which, employed as positive reinforcers, may serve to increase desired behavior on the part of each individual within the classroom.

While pinpoints arranged according to age of occurrence do offer some guidelines concerning potential positive reinforcers, the teacher should remember that preferences may differ radically from individual to individual. Careful observation of each child's activity choices will provide the most accurate picture of reinforcing events.

Summary

This paper has been written to discuss and build a rationale for using a developmental approach as the basis for selecting instructional behaviors and the sequence of instruction to use in teaching severely/profoundly handicapped children. After reviewing seven commonly used curricula, we were unable to identify a uniform basis or rationale for including particular instructional materials and sequences in the curriculum content. Each curriculum did seem to follow in one form or another a developmental approach, but to say that it was based on typical child development would be inferential.

There is an urgent need for uniform guidelines for arranging the instructional experiences presented to severely/profoundly handicapped children. Because of the children's extreme deficits, it is critical that we do not spend their time teaching them responses, skills and facts that are not essential to increasing their independence. We believe that using information on child development is the most practical basis for arriving at uniform guidelines for teaching the typical infant and child. The developmental approach can provide specific behavior pinpoints which can become the basis for an assessment sequence and the subsequent establishment of instructional objectives for their severely handicapped peers as well. To reiterate, using developmental pinpoints, one can establish a child's exact place in the sequence of skills development, and then provide appropriate programming interventions that match the child's instructional needs. As we said earlier, these programs, or curricula, must not be considered "fixed" or finished - rather, they must evolve in response to performance data collected over time from a very wide sample of severely handicapped children.

REFERENCES

Brown, L., Scheuerman, N., Cartwright, S., & York, R. *The design and implementation of an empirically based instructional program for young severely handicapped students: Toward the rejection of the exclusion principle*. Madison, Wisconsin, Unpublished manuscript, 1973.

Chalfant, J. C., & Silikovitz, R. G. *Systematic instruction for retarded children: The Illinois program*. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1972.

Cratty, B. *Developmental sequences of perceptual-motor tasks: Movement activities for neurologically handicapped and retarded children and youth*. Freeport, New York: Educational Activities, Inc., 1967.

Edgar, E., & Sulzbacher, S., Swift, P. E., Harper, C. T., Alexander, B., & McCormick, G. *Washington state cooperative curriculum; Exceptional Children*, 1975, in press.

Friedlander, B. Receptive language development in infancy: Issues and problems. *Merrill-Palmer Quarterly*, 1970, *6*(1), 7-49.

Gesell, A. *Infant development: The embryology of early human behavior*. New York: Harper & Bros., 1952.

Gesell, A., & Amatruda, E. *Developmental diagnosis*. 2nd ed., New York: Hoeber, 1947. (Reprinted by Harper-Row, 1969)

Haring, N. G. Preface. In Kunzelmann, H. P., Cohen, M. A., Hulten. W. J., Martin, G. L., & Mingo, A. R. *Precision teaching - An initial training sequence*. Seattle: Special Child Publications, 1970.

Kephart, N. Perceptual motor aspects of learning disabilities. *Exceptional Children*, December, 1964, *31*(4), 201-206.

Lindsley, O. R. (An interview with) Precision teaching in perspective. *Teaching Exceptional Children*, Spring, 1971, *3*(31), 114-119.

Myers, D. G., Sinco, M. E., & Stalma, E. S. *The right-to-education child (A curriculum for the severely and profoundly mentally retarded)*. Springfield, Illinois: Charles C. Thomas, 1973.

Ronayne, A. M., Wilkinson, P. A., Bogotay, N., Manculich, K., Sieber, L., & McDowell, M. *Perceptual-Motor development curriculum guide*. Pittsburg, Pennsylvania: Allegheny Intermediate Unit, 1974.

Schalock, R., Ross, B. E., & Ross, I. Basic skills remediation manual and Basic skills screening test. Hastings, Nebraska: Mid-Nebraska Mental Retardation Services, 1974.

Shearer, D. Portage Guide to Early Education. Portage, Wisconsin: Cooperative Educational Service Agency #12, 1972.

EDUCATION SERVICE DELIVERY - ARCHITECTURAL CONSIDERATIONS

EDUCATING THE 24-HOUR RETARDED CHILD

by

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April 1, 1975

The Educational Facilities Laboratories (EFL) is a non-profit corporation established in 1958 by the Ford Foundation to encourage and guide constructive changes in education and related facilities. In October, 1974, EFL published its first booklet of school planning for the handicapped called, "One Out of Ten". While not specific to the severely and profoundly retarded, this publication provides discussion of a range of issues and alternatives useful to consideration of architectural settings for education service delivery to that clientele.

EFL points out that legislation and litigation are gradually establishing the right of a free public education for all handicapped children regardless of the class or the severity of their handicap; an education appropriate to each child's needs. They point out that present patterns of educational offerings include many forms of restrictive environments well removed from mainstream education and suggest that these alternatives should be hedged by appropriate goals and legal constraints to achieve the least restrictive alternative for each child.

In principle, "the least restrictive alternative means that among all alternatives for placement within a general educational system, handicapped children should be placed where they can obtain the best education at the least distance away from mainstream society.

"The 'Cascade' system, first introduced in 1962 by Maynard Reynolds of the University of Minnesota and recently adopted by the Council for Exceptional Children, is one model for special education delivery which provides a wide variety of services in a number of alternative settings. The system begins by assuming that the greatest number of handicapped children can be absorbed into ordinary schools with little change in existing programs. Gradually, with each modification to the normal classroom setting, a smaller number of students is provided with a greater amount of resources and services...." (EFL)

The cascade is a continuous series of less restrictive alternatives which provides that handicapped children can be gradually transferred either away from or back toward the everyday classroom as their needs require and their abilities permit.

How can the severely and profoundly retarded fit into the cascade? Except for the few with chronic somatic problems which prevent their movement from the setting of their residential care, my hope is that we will be able to see most attending special class situations in the local school. I have several reasons for this hope.

1. Experiences with the cascade system and mainstreaming have amply demon-

strated the potential of retarded children at many levels of retardation to function beyond early expectations. There is no reason to believe that a wide range and upward reach of participation does not equally apply to the severely and profoundly retarded within their own individual capacities. It is only the ready availability of opportunities at all levels of functioning that assures the timely option of the highest choice within the individual's capacity.

2. An Airlie House conference on education precipitated much discussion of potential of the community as an educational resource and the need to extend the school into the community, but caused one participant to observe, "...our parents want to keep their kids in school and they want the community to come in and help them there". (EFL, 1972) It cannot but be reassuring to the parent of a severely handicapped child to know that the training of that child is set in the context of education of all children in the neighborhood regardless of the residential setting to which that child will return after class.

3. Severely and profoundly retarded children are being educated and trained to enable them to function as adults at their highest level of ability. Such functioning will necessitate for many some type of contact with society at large. The awareness of society of the condition, problems and potentials of such children will not be enhanced by hiding them away. Carefully controlled visability and participation in a school setting should have a positive effect upon future social acceptability of these people as children and as adults.

4. The movement from place of residence to school presents varied and potentially enriching experiences which can contribute to the educational process itself.

Among the alternatives reported by EFL are those individualizing instruction for every child and adding specialized support facilities to provide for the handicapped.

Miami's Dade County is building special annexes onto seven strategic elementary schools. All handicapped children are sent to such an elementary school within each of the district's seven regions. The annex provides the handicapped children with special attention by a multi-disciplinary team of teachers, psychologists, therapists and aides.

The mutual use of space shared by special education and regular instruction influenced the origin of a new type of school specially designed to integrate handicapped and non-handicapped students. One such school with which I am familiar is the Danbury School in Claremont, California. Designed to mainstream 90 orthopedically handicapped, and six multiple handicapped youngsters, with 120 neighboring elementary pupils, the school's layout comprises three open plan pods for the neighborhood kids and two adjacent pods for the handicapped. When the school opened, the two programs operated independently. However, they soon began to merge principally because special equipment for the handicapped attracted teachers from the regular program and because school officials deliberately planned a joint teacher planning office. The Danbury School featured an individualized curriculum which did not discriminate between handicapped and ordinary pupils. With barrier-free facilities reinforced by special support equipment, each child was able to proceed unencumbered at his own rate.

As Harold Gores, President of EFL, put it: "Twenty years hence the word school will become redundant. The place of education will be a center where people of all ages and sizes who desire to learn from each other, and can, gather".

An indication of what these educational gathering places might be can be found in the Whitmer Human Resources Center in Pontiac, Michigan. The nucleus is a series of mini-schools for elementary pupils and nursery children, a community college extension, adult education spaces, a medical and dental clinic, welfare and emergency relief services, legal aid services, citizen assistance, job training and placement services, a library, a restaurant, community lounges and meeting rooms, a gym and dance hall and theaters. The linking pedestrian streets and malls provide places for strolling, gathering, and relaxing.

In collaboration with the school's regular staff, the special education department invented the "learning center", a resource room staffed by half the school's special education personnel. The other half is integrated into the regular teaching team in the classrooms. Thus, all handicapped children are compassionately integrated into a continuous learning process. Here, special education benefits from and becomes a part of the myriad of other services working together on whole problems instead of picking away at unrelated pieces treated by literally dozens of unrelated agencies.

Accepting the desirability of the school, learning center or gathering place as a locus for training of those who can physically access such centers, what environmental circumstances can we expect to find compatible to the needs of our clients. The Airlie House conference produced identification of a few characteristics that seem equally applicable regardless of the intellectual level of the student. They are:

HUMAN SCALE: Physical settings must satisfy the need for a sense of identity. Whether it's a house, or a factory or a city or a school, it's got to have human scale.

PERSONAL TERRITORY: Students and teachers alike need a sense of their own turf: a personal place to be alone and separate from group pressures.

SPATIAL VARIATION: A building should provide options in the size and shapes of sub-spaces so people can gather in two's or four's or larger groups.

SPATIAL ORDER, NOT SPATIAL UNIFORMITY: Patterns of use should not be predetermined.

MANIPULABILITY: The environment must allow itself to be manipulated by its users so spaces can be changed. Functional considerations aside, a facility that allows itself to be manipulated gives its users a sense of possession.

ENVIRONMENTAL FEEDBACK: A school facility must allow its occupants to stamp their presence on it. It must be ready to accept the graphic presentation of student activities and interests so that the building reflects who they are and how they're doing. Displays of student work help to build their sense of identity. They also make the surroundings more lively and relevant, too.

OPTIONAL SEATING AND WORK SURFACES: The facility must acknowledge that people work in a variety of natural postures: sitting up straight, lounging, leaning, perching, standing. It should offer a variety of seating (including the floor) and work-surface heights to accommodate them.

GRACEFUL WEAR AND RENEWAL: Furniture should be allowed to be worn, used up, and renewed.

WORK ESTHETIC: The look of learning in action is a busy one, with things out and in active use. But this seems to violate some cultural sense of order. Administrators, teachers, and custodians have to understand that a place by being useful, interesting, and relevant, becomes attractive to its users.

Some of these characteristics, namely human scale and territoriality have been concepts introduced into residential settings for the retarded a decade or more ago. How do we incorporate these and such characteristics as spatial variation, spatial order and manipulability into the educational environment? The Danbury School mentioned above provides some cues. The educational pods, as they are called, are large areas without structural interruption or subdivision which serve several classes. Where the open school program works to the advantage of the student, the arrangements for class area, circulation space, etc., can be very flexible. The floors are carpeted. The ceilings are quite low - low enough to avoid a large space feeling as furnishings and storage units are placed to form subdivisions of space. Small rooms, such as toilet rooms, are on the outside wall as overhead lighting provides an even and non-distracting illumination.

Judicious placement of furnishings and space dividers, as in use for office landscaping, can create the focus upon the interests of the one to one, or one to two or three, that will, for the most part, make up the activity programmed for the severely and profoundly retarded. The space dividers, often curved and carpeted, form an ideal surface to which to adhere articles of student work to enhance their feelings of accomplishment and belonging.

Some totally subdivided small spaces would be required so that a few rooms, perhaps accoustically treated at the periphery along with the toilets, would be useful.

Such a class area would lend itself to innumerable changes to accommodate the equipment and program needs of the students. Fairly low ceilings and flexible partition placement could yield human scale. Well established areas for treatment and exhibit of artifacts of each student will introduce territoriality. Spatial variation, order and manipulability would derive from equipment and partition design and placement. Exhibit of student work in their area would yield environmental feedback. The other desired characteristics would flow from an imaginative use of this basic design.

Such a class arrangement could meet the program needs of severely or profoundly retarded students and allow for interaction with others who return to this class with its more specialized equipment from other special classes or regular classes wherein they have been participating in mainstreaming on a part time basis.

Play is an important part of the learning process for children. There are developing around the country, in conjunction with schools, training centers and hospitals, a variety of innovative play structures or environments which are very different from the traditional playground and its equipment. The Magruder environmental therapy complex at Forrest Park School, Orlando, Florida, is such a play environment. Additionally, it and the nearby models for which it has been a prototype, have been subjected to research regarding use by and response of a variety of children including trainable mentally retarded, other handicapped children, normal children, and controls.

Significant finds have been reported with regard to the ability of retarded children to report visual images suggested by their participation in the complex. "The retarded children from the experimental group showed a higher level of language acceleration than their comparison group in the use of nouns, adjectives and phrases when describing their inner images. These results confirm language acceleration in an enriched environment." (Shaw)

Other observations include:

"All of the TMR children were able to understand the model, (a scale model of the complex) although about 40% needed an explanation."

"Rutter (1966) suggested that the etiology of infantile autism is in the inability of the children to handle auditory information. These preliminary results, hinting at the lack of geographic coding, show severe problems in spatial cognition as well and could lead to valuable understanding of autistic problems."

"TMR children were recorded most often on the overall observation charts at level 1 (lower than normal children). Interestingly enough, they also tended to occupy the highest level, level 3 (6 ft. to 9 ft.), more often than normal children. In general, TMR children played, more vigorously and at more levels than was expected at the projects inception. Also, they showed no fear of small spaces or closed, dark tunnels, as previous literature indicated they might."

"TMR children continue to play throughout the (complex) with a high preference for its environment over an adjacent typical playground."

Such environmental complexes or play environments incorporate a wide variety of spaces, patterns, forms, textures, levels and experiences for a child. They may be manipulated in that elements can be moved, restructuring the spaces and the play opportunities. Some units of this type have been utilized within the classroom, and when provided outdoors would seem to be an ideal compliment for the open plan class situation for the severely handicapped.

There are few known criteria for design of these environments. There are, however, enough of them in use from New York to California to Florida so that useful research might well establish guidelines and advice to further development.

As reported by Panyan and Patterson, "Ninety percent of the severely and profoundly retarded children there mastered the skills (variety of self care and social skills) within a few months. As for the ten percent who did not, the problem was due to teacher or program error rather than to student deficiencies". (Sigelman) The severely and profoundly retarded can be taught. The courts and legislatures are moving our society to assure that they will be taught. Cascade, mainstreaming, and educational centers are telling us where the teaching should be focused. The open school and environmental play complexes are opening a rich new world of stimulation and opportunity to support the efforts of the teacher and other training personnel. Training can extend from the classroom to the home or the hospital as education is not just a something that takes place only in a school. It takes place through all the direct experiences and vicarious experiences we have.

The potential for the training of the severely and profoundly retarded is considerable. Let us not needlessly limit that potential with constraints of system or form of building.

To paraphrase what Edythe Gaines has said, "most of the work of the world is done by people of average ability. So, let's not ask teachers to be brilliant. Design school systems, classrooms and programs so teachers can behave brilliantly. Some genius designed the telephone so I can behave like a genius each time I dial". (EFL)

BIBLIOGRAPHY

Educational Facilities Laboratory, One out of ten - school planning for the handicapped, New York: Educational Facilities Laboratory.

Educational Facilities Laboratory, The greening of the high school, report of a conference on education at Airlie House, April 11, 1972, New York: Educational Facilities Laboratory (1972?)

Shaw, L. G. Report of research objectives - spatial behavior in the child's playscape - Division of Sponsored Research. University of Florida, Gainesville, Florida. (unpublished)

Sigelman, C. K. (Ed.) Behavior modification in three settings, R & T Center in MR. Texas Tech University, Research and Training Center in Mental Research, Lubbock, Texas. (1973?)

THE HANDICAPS OF BUDGETING FOR THE HANDICAPPED

by

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April 1, 1975

I must admit that much of what I am going to speak about this morning was rewritten in my hotel room last night after listening to the presentations of several of the initial speakers. My first rewriting was somewhat time consuming and difficult. The second rewriting was considerably easier since it included basically removing seventy-five percent of the exclamation points. That just shows what a little cooling down period can do for everyone. My responsibility was to talk about the financing of programs for the severely and profoundly handicapped. I do intend to stick to that responsibility, but I am going to alter the direction slightly. I'm going to direct my remarks more specifically to the politics of financing programs for the severely and profoundly handicapped, and to some degree deal with the financing of all programs in the public sector. I admit that altering my remarks leaves me with mixed feelings somewhat like the father who caught his teen-age daughter coming in at three o'clock in the morning with a Gideon Bible under her arm.

The questions of financing seldom have their initiation in one reasonable and logical location. Financing is initiated from local requirements, statutes that are enacted by the Legislature, court cases which determine that a school district must do or should be doing something, etc. Most of what we learned in Education Course 101 becomes obsolete before the course is completed because the variables concerning what a school district is supposed to do are changed in that short period of time. Perhaps it would be helpful to look at schools in a much larger and historical context. Perhaps the thinking that has changed most over the past several decades is the question of the school function directed at the benefits of society as a whole versus the school function directed at the benefits of each individual who attends school. We should keep in mind that mandatory attendance in high school is only about forty years old. Obviously some states have required mandatory attendance longer than that, but the universal phenomenon of mandatory attendance is relatively new when we look at the larger historical context. When formal schooling was initiated in the public sector there was little doubt as to who the beneficiary was intended to be. The beneficiary was the general society. Kids were sent to school because it was good for them and it was good for society. The same kids were sent to churches and other institutions for the same reasons. The fact that the youngster didn't like what he was doing was unimportant. If America was to have a strong, democratic society its young must be trained in the basics and be able to intelligently understand what that society was all about. Operating on that thesis made running school systems a fairly easy procedure.

Significant changes have taken place, however, in the past several decades. These changes can best be seen external to education in schools through such things as the consumer movement and the civil rights movement. The same type of thinking has redirected the efforts in public education as well. The primary thesis of such movements stresses the importance of the individual (as opposed to the collective society). Whereas schooling was once seen as an opportunity to contribute to and benefit the general society, it has changed to an obligation of the general society through its institutions to see to the benefit of the individual person. This has moved the focus from the collective group to that of each individual. Whereas it was relatively easy to get some consensus type direction from the collective group, it is extremely difficult to determine what the needs are of each individual within that collective group. It is perhaps similar to the idea of administering to the health needs of a general population through an all-inclusive public health program and then changing the means of providing for those health needs through the use of individual physicians. Obviously the second way is much more difficult and much more expensive. Right in line with that analogy is the increasing evidence of the individual demanding certain kinds of performances to them as individuals as reflected in the vast number of increases in medical malpractice suits, and all the additional problems that have generated.

In addition to the historical context which indicates a change in the concept of what schools are supposed to do is the growing number of interest groups who want their particular interests reflected in the school curriculum. We have recognized that the school system is the "only game in town" when it comes to training the young and promoting their particular interests. I am not suggesting for a minute that these interests are not good ones, nor that they are not important to society. I am only indicating that there are a lot of them and each one wants "a piece of the action." Let's examine a few. The environmentalists want to be sure that the schools train the young in the dangers of pollution. The consumer educators want to be sure that youngsters know how to be wise and prudent consumers. Health groups stress the importance of students being advised on the evils of venereal disease, smoking and alcohol (I discussed this with several of you in the bar this morning). Human relations proponents want to help individuals and groups live with one another more comfortably. Career educators, when not feuding with vocational educators, are concerned with how people will make a living when they leave the school environment. Special educators are suggesting that juvenile delinquency may not be juvenile delinquency at all, but simply a student who is emotionally disturbed, and the school can help correct this through its classes for the emotionally disturbed. Social studies teachers are convinced that Watergate is evidence that the country is morally bankrupt, and that we ought to get back to values education. Early childhood educators are actually convinced that it won't make any difference at all if the child doesn't get a good running start, and the people down the block are still trying to figure out what we were doing in the first place, and that somehow we ought to get "back to basics."

Now if that were all I suspect we would still be on "Easy Street" in running a school, but in addition to the aforementioned the school has added additional responsibilities that have little to do directly with the three "R's." These could include the following:

1. The schools have increasingly become the entertainment center for most adolescents. Take a quick look at your newspaper and see how many movies a youngster can legally attend if he is not eighteen or over. Most of us used to go to the movies. Our parents thought that was reasonably safe. Now they are scared to death if we go to the movies.
2. Schools do an increasing amount of medical screening, dental screening, and in many states with new legislation, psychiatric screening.
3. The school system has become the primary vehicle for creating social equity. Busing is no longer simply a means of getting a youngster to school, but now includes creating a balance of students with different racial and ethnic backgrounds.
4. Two years ago our Board of Education and Superintendent adamantly said, "There's no way that the school system is going to get involved in feeding the elderly." We just started our first program in feeding the elderly last week. Incidentally, they also said we certainly weren't going to get into the day care business either. Our first three day care centers have been operating for about a year now.
5. The school has become the last bastion for a type of morality enforcement. Ask yourself if you know of any place in the city that a youngster under the

age of sixteen is not allowed to smoke. There is only one place left and that is the public schools. Even the barriers in many churches went down several years ago. It is always curious to me that when a drug problem is found among adolescents that that drug problem is given ownership to the schools. The papers read, "East High Has a Drug Problem," or, "West High Has a Drug Problem." It never says that Rotarians' kids have a drug problem, or that Presbyterians' have a drug problem, or that rich kids have a drug problem. It is just East High that has a drug problem. I wonder if there was a big chicken pox epidemic would the papers give ownership to the school. Somehow, I've never read that East High has a big chicken pox problem, etc.

6. Other things we've picked up by default. The best illustration I can think of here is draft information. Where did you and I go to get information about the draft? We went to the local draft board. That's what it was for. They handed out material and told us what we were supposed to do. Where do kids get that information today? They get it from the school counselor since that information has been moved from the Selective Service Offices into the public schools. For an institution that people were describing irrelevant only seven or eight years ago, it seems that an awful lot of things are being loaded on an irrelevant institution.

If that's all that we had to consider we still might feel that while we had left "Easy Street" the road was still not impassable, but in addition to the responsibilities added to the school system we now see additional constraints:

1. People have learned that it is far easier to get laws changed through the court system than through legislation. It costs relatively little today to start a court suit, and even those court suits which relate to tying your dog up during the summer have, in the minds of the Plaintiff, some major constitutional question. The outcome of a court suit needs only a single judge to make a decision which can throw the whole operating procedures of a school system into a shambles. Certainly such suits can be overturned or the judge finally determined as mentally incompetent, but nonetheless there is a long intervening time in which the procedures of the school system if not changed are in contempt of court.

2. Unions have increased their militancy and advocacy over the past decade. In the United States Congress right now there is a bill which would make

public bargaining and public strikes legal in every state in the Union. I personally have no particular thoughts on this, but only point out the issue to indicate the additional kind of constraints that school systems operate under.

3. Up until about ten years ago public institutions were ineligible for law suits which extracted financial settlements. This was in accordance with the whole English common law proposition that "the King can do no wrong." This is no longer true. Not only can public institutions be sued for financial damages, but individual members in that public institution can be sued personally and directly for financial damages.

4. The property tax has come under careful scrutiny and change. While the Sarrano decision did not upset the apple cart like most people thought it would, the dicta included in the opinion indicated that most states ought to reexamine the support of the school systems primarily through the use of property tax. Here again, I am not making a value judgment on whether or not this ought to be done, but simply indicating the changes and confusion that such actions create for operating school systems.

5. Many of the private and parochial schools throughout the country are folding. They simply can't afford to continue the same kind of program that they once could. When such schools close their doors they almost always transfer their students to the public schools. Perhaps it is somewhat fortunate at this point in time that most school systems are experiencing a declining enrollment and are more likely to have additional room for such students. The list of constraints could probably go on to another half dozen, but I think this is adequate to give an overall picture.

Looking specifically at programs for the severely and profoundly handicapped I am in agreement that this is a responsibility that the public schools should handle. But here again, there are problems to be examined. The more profoundly handicapped the student, the higher the cost to deal with that student. The ability to finance these costs varies appreciably from state to state and from district to district within each state. In Wisconsin, we are fairly lucky in that the state support is quite high (seventy percent). This is not true throughout the entire country. Many legislatures have within the last two to three years mandated that school systems provide appropriate programs for all severely and profoundly handicapped students. But as legislatures are sometimes prone to do, they mandated the responsibility without providing the financial wherewithal to do it. This simply means that most districts have to reallocate finances that are already stretched to the limit to provide for such programs. Again, I'm not suggesting that they shouldn't do this. I'm just citing the reality of what happens. Finally, with the expansion created by legislation and judicial decisions in the field of the handicapped during the past several years, there still remains a considerable lag in the numbers of teachers being trained in this area. It will take a while and a lot of money to gear up the training institutions to process the numbers that are being needed. It is one thing to mandate a program that will immediately call for a hundred teachers, and you can only find twenty-five on the market.

If I were to stop at this point, I would simply have to agree with Chicken Little that the sky indeed is falling in, and we should all seek shelter in one of the basement rooms of this hotel. While the skies certainly are cloudy, maybe there are some things that we can do. First of all, I think we can do an appreciably better job of disseminating what we already know about programs for the handicapped and the impact of those programs on school systems. Our marketing system of information is very bad. If General Motors had to rely on the marketing system used in education it would probably be only slightly ahead of the success enjoyed by the Tucker automobile. Massive federal support has gone into generating information about the programs concerning the handicapped, but very little into providing information regarding the impact of such programs on a school system, or providing technical assistance, or how school systems can appropriately develop and support such programs.

The training institutions for training teachers of the handicapped must grow dramatically in the next several years, and in addressing this problem they must seek out their allies in the public schools. In most circumstances, the alliance between the public schools and the training institutions is not all that good. As a matter of fact, in most circumstances it is bad. I'm pleased that this is not so in Madison, Wisconsin, where a very strong relationship between the University of Wisconsin and the Madison Public Schools has been nurtured over the past several years.

People who are out in the forefront of special education and training in special education need to spend more time talking directly with people who are in the position of making decisions within the public schools. I have been to several conferences of this sort, and always note that the same people end up talking to the same people. Let me run a little test. Will all the superintendents of schools in the audience please stand up. (No one stood up.) Will all elected members of Boards of Education in the audience please stand up. (No one stood up.) I think the example illustrates what I'm talking about. I am not suggesting that these people are smarter, wiser, or better able to deal with the problems of the handicapped than you are. I am only suggesting that these are the people who have their "hand on the throttle" when it comes to making decisions concerning the finances in school systems. I would suggest that you make a concerted effort to start talking with these people directly at their conventions such as the American Association of School Administrators, or the National School Boards Association, or start inviting them to your conventions.

Finally, I think that we have got to get much more creative in dealing with the problems at hand. Sesame Street is an illustration of how someone got creative and got something going. We have got to find creative ways of addressing our problems, not only among the professionals but in determining how we can better utilize the supportive and teaching functions of parents who have a great concern about their handicapped youngsters. If Bonnie Pruden can entice anxious housewives each day to go through the rigors of creating the body beautiful, I am convinced that we can use the same medium to send information into the homes of parents with handicapped youngsters to assist them in helping their handicapped youngsters. We need to learn how to better utilize other supportive agencies that already exist within a community and are designed to assist handicapped people. I am advised that there are four hundred such agencies in the greater Madison area. This number sounds quite large to me, but whether or not it is only fifty percent of that number is irrelevant as we are expending a great deal of time just trying to work with two or three. There must be some way, however. Last, we have got to develop better information assistance. While conferences such as this are fun and journals do a certain job, this is a very slow and tedious way of transmitting information. There are whole sciences and industries who work with the rapid transmission of information, and I don't think we have even come close to understanding or using the technology that is conceivably available.

I appreciate the opportunity to speak to you this morning, and hope that my remarks had some additional perspective to the problem at hand. It is my hope that by getting a perspective in order we can all do a better job of addressing the problem.

PREREQUISITE CONDITIONS FOR THE ESTABLISHMENT OF EDUCATIONAL PROGRAMS FOR THE SEVERELY RETARDED

by

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April 1, 1975

INTRODUCTION

My associates and I have been involved in the development of an instructional technology for the severely retarded child for the past three years. Our basic objective is to develop a highly programmed instructional environment where children learn with a minimum of error. To meet this objective, we have designed learning environments, and developed curricula, automated instruction, teacher competency training modules and behavior observation systems.

During this three year period we have observed that for children to be successful, we must pay careful attention to the conditions for learning. First, we spend considerable time developing skills which are considered prerequisites to instruction. Then, we develop teaching programs by analyzing the instructional sequence, and specifying both the correct response and the most likely way a child may fail. The lesson is structured to increase the probability of success, and reduce the likelihood of error. I would like to use the same process today, to discuss the factors which are necessary to insure that education for the child of the year 2000 will exist in fact as well as in principle. I do not believe that adequate educational programs will develop unless we pay careful attention to the prerequisite conditions, or events, which are under the control of the participants at this conference. I do believe that it is important to look at our behavior in historical perspective, to analyze documented sources of failure, and to develop more appropriate strategies for public education for the severely retarded.

What we have done, what we should do,
and what we ought not to do again

This is the third time that special education has been called upon to develop educational programs for a "new" population. The first demand was occasioned subsequent to World War II, when educational programs were expanded for the educable retarded. A massive infusion of federal funds to university training programs was initiated under PL 85-926 in the early '60's. Concurrently, a second demand for public school classes for the trainable child grew sufficiently intense to generate university training programs leading to certification in "TMR". Caine and Levine (1963), conducted an evaluation of conditions in those first classes. They evaluated the social competence of trainable retarded children [illegible] institution and community settings, and compared children who did and did not attend school programs in both settings. One finding of particular significance was that children living in communities who did not attend school fared as well on their measures as those who attended public school classes. The problem was apparent, universities with poorly conceived programs had certified inadequately trained teachers who entered classrooms with few technical skills, with a limited view of the potential of their pupils, and without a philosophy, or supervision, to assist them in planning viable educational programs. It was apparent that the field of special education was ill-prepared to meet the demand for services. Now, for the third time, we are being asked to develop educational programs for another "new" population - the "severely retarded" child. From my view, we are even less well prepared to meet the demand which is growing across the country under the force of litigation and legislation. However, national attention is focused on public education for the severely retarded, teachers presumably are being trained, classes are being filled and service delivery systems are being established. Because the need is so great, the pressure to implement programs is intense, and there is every likelihood that history will repeat itself. If it does, we will experience failure on a massive scale, and it will be documented in our inability to show that children benefit from our programs. History need not repeat itself, and there is evidence that our initial steps may be directing us toward a better beginning. However, our present efforts to conduct national planning activities, to conceptualize and implement instructional technologies and alternative delivery systems and to begin competency based teacher preparation programs will not guarantee effective education for the child of the year 2000. Again, employing the process we use to develop errorless learning programs, I would like to suggest strategies which may increase the probability that educational resources are guaranteed for the child with severe developmental retardation.

First, I should tell you that my original title for this presentation was "a basic primer for a no-fail system for turning public education classes for the severely retarded into back wards (complete with shit and Lysol)". My choice of words was deliberate, not capricious; and was intended to bring to mind scenes from Blatt and Kaplan's picture essay Christmas in Purgatory . My purpose was to encourage you to consider the notion that our current endeavors could produce a similar outcome. Though unpleasant, it is entirely possible, since the bases for the support of public education for the severely retarded are fragile and national attention will surely turn in a different direction when another pressing need emerges. The justification for the existence of these classes may erode as quickly as it emerged, if there is no empirical basis to document their effectiveness. These realities prompt a review of our historical errors, and lead to suggestions for a stable framework for program development.

Federal planning and support

Much of what must be considered has to do with the federal dollar, and how it wends its way to impact on an individual child in a classroom environment. Therefore, the discussion starts at the federal level, and ends with suggestions for parents and their advocates to use to develop action plans at each level of government or with each educational agency.

If history were to repeat itself, the Bureau of Education for the Handicapped would distribute support funds across the country to stimulate state department activities and university training programs. State departments might receive fellowship funds to enable teachers to receive training at the college of their choice. Those colleges might expect to receive training grant support for programs which meet hastily determined criteria for certification by offering one or two courses in theory or methods for the severely retarded.

Short-term workshops might be held which accumulate credit for certification in "SMR". Universities might receive funds for traineeships before program development activities are complete and might receive increasingly more support as the number of students completing the programs increased. The result was, and if repeated, will be a proliferation of inadequate pre- and in-service training programs which emphasize production of a quantity of minimally trained personnel.

A better approach is, of course, a selective one. Planning for a national, coordinated approach to the development of services will identify the number of university training programs needed to meet current and long term needs and, by the way, that number will be relatively small. Earmarking funds for program development staff prior to awarding fellowship funds will insure that students receive a well conceived educational program. Federal support to state education departments should require documentation of intrastate coordination to qualify for assistance. Where funds are directed toward skill development in teachers, for example, federal and state criteria should be based on long term documentation of changes in teacher performance rather than teacher response to the learning experience. In summary, federal funds should be dispersed contingently, based on documentation that significant change occurs in the functional level of the recipient.

State department of education roles

State departments of education have influenced classroom practice to the extent that resources and state regulations have enabled them to do so In the past, limited resources have generally precluded an active supervisory role in improvement of instruction in an individual classroom. Instead, resources were used to direct funds to those settings which qualified for them. This was generally defined as x square feet of space per pupil, desks, chairs, and a "certified" teacher. Personnel generally assumed a consultant role in the process of determining the criteria for certified teachers. In many instances, personnel were responsible for arranging in-service programs to acquaint teachers with new methodologies. Generally speaking, those experiences carried little or no performance demand.

The advent of court-monitored educational programs may alter state department roles to create more direct involvement in the classroom. At the same time, personnel may become more actively involved in determining teacher competence. The first problem which must be dealt with is the reality that there are virtually no certification programs for the teacher of the severely retarded, and there is an immediate demand for "certified" teachers. State department personnel must take responsibility for articulating the distinction between certification and competence to those various regulating bodies who will eventually determine who is "qualified" to teach the severely retarded. This is particularly critical at this point in history because there are highly competent but non-credentialled teachers who have had extensive and successful experience in mental health or private nonprofit agency classes. At the same time it is reasonable to assume that there are inept but credentialled teachers who might be employed to meet immediate needs. There must be a strategy to develop a performance based, decision-making process which will enable non-credentialled teachers to continue working with children and to exclude inept teachers from classes for the severely retarded. Widespread knowledge of the various approaches to competency based education and performance based teacher evaluation should be brought to bear on this process. I would suggest that any "certification" program require that the teacher credential be based on documentation of positive change in child performance over time and on increasingly more complex tasks. I would also suggest that teachers' skill training can be accelerated if state in-service training support funds are channeled into performance based programs rather than to one-shot workshops which may or may not change teacher behavior.

University program development

The beginning of the 1960's marked the appearance of instant experts in mental retardation, as colleges and universities took advantage of program assistance grants to train professors and classroom teachers to work with the mildly retarded. Drawing on modifications of elementary curriculum, a limited number of educational approaches were promulgated in numerous institutions across the country. Summer retraining programs offered teachers the opportunity to become certified to teach the educable mentally retarded with a minimum of course work and extremely limited practicum experiences. Shortly thereafter, a more limited number of these experts began to train teachers of the trainable retarded. Curricula were modified again, children were placed in classes, and a great babysitting endeavor was begun. When it was apparent that "TMR" children were more hetero- than homogenous in behavioral attributes, an occasional aide was employed to assist the teacher. The effects of this course of action have been described, and I believe it is reasonable to assume that results of a replication of Cain and Levine's study would be substantially the same as the results obtained twelve years ago.

Today, less than ten universities are sufficiently staffed with the expertise to conduct or begin program development to train teachers and other college personnel to work with children with severe developmental retardation and multiple handicapping conditions. History will repeat itself if those ten become a hundred in two years; if training programs follow traditional models, and if courses are staffed with professors who lack expertise in the area. A more successful approach to the development of training programs is likely to emerge if program assistance funding is made available to those universities with adequate resources to train personnel; if their program graduates demonstrate competence on defined and observable behaviors during long term practicum experiences; and, again, if the criterion for success is the ability to produce positive change in child performance. If these conditions are accepted as a standard, program graduates should be better prepared to document their effectiveness in the public schools.

Public school considerations

In the past local education agencies found themselves in severe financial distress as they began to provide education for the retarded. Manpower and materials were diverted to these classes to meet the intent if not the letter of the law. A common teacher complaint in the '60's was that they "had 15 kids, chairs, desks and no materials". That complaint is less common but not unfamiliar today. The problem was intensified when classes for the "trainable" were initiated after resources had already been strained to develop services for the "EMR". Parents were so pleased that their children were in the public schools that they failed to determine if the learning environment had been structured to enable children to receive an education. Further, no one was particularly concerned to know precisely what children in "TMR" classes were supposed to learn during the course of a year; or, if they did learn. This climate has not fostered a critical analysis of educational programs for "TMR" children. If the attention which is now focused on the initiation of services for the severely retarded were also directed toward an analysis of existing programs for the "TMR", there is every likelihood the data would show that "educational opportunities" are extremely limited in both instances. From my view, criteria should be established to evaluate the quality of education in classes for severely retarded children before those classes are initiated. Those criteria should form the basis for evaluation of existing "TMR" classes, a task which is long overdue.

Current efforts to establish a right to education or to guarantee equal educational opportunity will not be successful unless adequate resources are obtained to accomplish the task. Equal opportunity generally assumes equal distribution of available funds to all school age children. There are, however, different legal interpretations of "equal". My interpretation is that "equal" means every severely retarded child is guaranteed access to all the resources necessary to enable him to receive an education in fact. This includes instruction from birth to regular public school entrance age. This is not necessarily a widely held interpretation and, although it may seem reasonable, concerted effort should be directed toward strategies to guarantee sufficient resources to insure valid educational experiences. This may include dispersing funds for a variety of alternative models of instruction, including home instruction, computer assisted instruction, and support for parent training activities.

Parent involvement

Parent involvement initiated programs for the trainable child, and is the underlying factor that brings us together today. If history tells us anything, it is that sustained and persistent advocacy efforts are necessary to insure delivery of appropriate educational programming. For the present this means that parents should reject negotiated consent agreements which comprise or reduce the resources available to their children. Parents should remain aware of the potential gap between promised and delivered service, and should decline to accept educational promises on face value. They should know that it is possible to write and record responses to precise educational programs and should insist that they receive documentation that instruction does occur in public school settings. Further, technology and systematic programming strategies exist to enable children to learn with a minimum of error. Contractual arrangements should contain provisions for parents to obtain detailed information on a daily basis, and cumulatively over extended periods of time. Objective statements of performance should, of course, be couched in positive terms of human potential and should contain documentation to substantiate that view. Most important, parents should remain involved in the educational process to insure that educational opportunities are both established and maintained.

Professional advocates

Members of the legislature and the legal profession are here as new participants in the development of educational services. The best strategy which they can implement is to listen very carefully to parents and to educators who are experts in program development. Efforts to date have brought some children into the public education system; however, toilets in classrooms, transportation and the presence of adults are only first approximations to an adequate education. Work is underway to assist parents, teachers and public school administrators to discriminate what education is from what it is not. No one should be surprised when parents become litigants a second and third time, if they are not shown that their children are being educated. Teachers should be expected to document that they have changed child behavior, and should be liable if they cannot. At the same time if a school district fails to provide its teachers with sufficient resources to teach and document that students learn, then teachers' liability should be transmitted to the district, by teachers' legal action if necessary.

Where do we stand at the moment?

In relatively good shape, I would think. The Bureau of Education for the Handicapped has initiated a variety of strategies to engage in program planning on a national basis. The Division of Personnel Preparation has been shifting rapidly to require university programs to document the quality rather than the quantity of students they train. Observations seem to confirm that program support for training is being directed only to those universities with the history or capability of high quality training. The initiation of model center programs and telecommunications projects represents an attempt to focus attention on innovative and quality educational programs. Coordination of research and teacher training activities insures complementary research and development activities. Certainly, this conference represents an effort to engage all participants in the educational process in a cooperative and product oriented activity.

A small number of exemplary university training programs exist which are directed toward data based, practicum oriented instruction for children, and competency based training of teachers. It is too early to determine how equal educational opportunity will be interpreted in each state, or how demands for education are being met with quality programs. However, I have observed a limited number of classes for severely retarded children and have seen some dynamic teachers who are able to document child performance and to develop instructional tasks which reflect high expectations of children's behavior.

Summary

Equal educational opportunities for the severely developmentally retarded are being established on an exceedingly fragile basis. A third misapplication of traditional approaches to the education of a "new" population of severely developmentally retarded children is doomed to failure, and may transfer back wards out of institutions into the public schools. Major events in the historical development of special education have been examined, and strategies to avoid a repetition of history have been listed. I have suggested that severely retarded children can learn at high and relatively error free rates when the environment is structured to facilitate learning; that the conditions for learning can be specified and should be contracted; that documentation of learning performance is possible on a daily basis and should be expected; and that there are alternatives to traditional class structures. I have suggested that adults must carefully structure the environment to insure that educational services will be provided on a long term basis In closing, let me repeat that a major factor that will guarantee education for the child of the year 2000 is sustained and persistent involvement of parent and child advocates in the development of educational programs.

REFERENCE

Cain, L. F. & Levine, S. Effects of Community and Institutional School Programs on Trainable Mentally Retarded Children. Washington, D.C.: The Council for Exceptional Children, 1963. (NEA, CEC Research Monograph. Series B., No. b-1).

EDUCATION IN NON-SCHOOL SETTINGS:

WHAT'S THE PURPOSE?

by

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April 1, 1975

Since this is a conference which focuses on severe handicaps, I'll share with you a severe handicap of my own. And that is a neurotic fascination with words, idioms, and metaphors, especially as they appear in the field of human behavior.

I have never understood, for example, what a "nervous breakdown" could possibly be. In my mind, I imagine peering through a microscope and watching little neurons crumbling before my very eyes. Or, I imagine the victim shaking his head, producing the delicate sound of millions of shattered nerves tinkling against one another.

In the same vein, the struggle for a literal interpretation of what the term "mental age" means has given me many sleepless nights over the years. What does it really mean to say "Ol' Tom is 20 years old but he has the mind of a five-year-old"? Only recently have I been given any real therapeutic assistance in this matter; and that help has come by way of my friend Marc Gold.* We assign a "mental age" to people based on a correspondence between what the testee is able to do, irrespective of his calendar age, and what most humans at a certain age have been observed to be able to do. Simple so far. In discussing his "concept of five-year-oldness," Marc asks us to question whether what we observe five-year-olds doing represents the limit of skills and performance they could do if someone bothered to teach them. Marc asserts that much of the things five-year-olds don't do is a result of social inconvenience to teach them or a lack of a functional need for them to be able to do those things. For example, normal five-year-olds most often don't need to drive automobiles, take full responsibility for the care of younger siblings and peers, prepare hot meals from recipes, read books, earn a living, or present papers at conferences on the severely handicapped. After all, they only have 365 days to be five years old, and the teaching of those skills can conveniently wait until they turn six, or ten, or eighteen, or thirty-three.

But what if it were socially imperative for five-year-olds to be able to do these things? Could they be taught to do them at that age, given their cognitive or symbol manipulation skill development? Marc Gold is sure they could be taught, and so am I.

So what posture should we take toward Ol' Tom who has the mind of a five-year-old and will presumably be that mental age for the rest of his life? If we take the metaphor of mental age literally, then we open up a world of infinite learning

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* Dr. Marc Gold, Children's Research Center, University of Illinois, Urbana-Champaign

opportunities and achievement which will allow him to do most of the things we do in our daily lives. Not all, surely, but most.

What does all this rambling about literal interpretation have to do with the discussion of education in "non-school settings"? I hope it brings me to the point where I can talk with you about the literal interpretation of the purpose of human service agencies.

Suppose I were to announce to you that the purpose of the agency I represent (ENCOR), the reason for the organization's existence, is to maximize the development of every retarded client to the limits of their potential. Well, I cannot, in good conscience, make such a statement to you. I have thought a lot about the literal meaning of this notion of "potential," and the analysis worries me.

Most of us, I suspect, are happy to remember that, at crucial points in our lives, someone was there to help us develop and grow as humans. But wouldn't we be hurt if that "someone" had told us early in our developmental struggle that the limits of our potential had been reached, that there was no point in trying anymore? That's the danger inherent in the colloquial use of the term "potential": literally, it implies a quantity of possibilities, a limit to what can be. I don't want that expectation applied to me. Consequently, in all fairness, I personally refuse to apply it to people who happen to be called "retarded."

Having said that our agency's purpose is not to maximize the "potential" of our clients, what, then, is ENCOR's reason for being? Some months ago, our Executive Director, Linda Glenn, requested agency workers to develop a clear purpose statement for the entire organization and for each of its major divisions. Many of us worked on compiling a basic set of key terms and values that should be reflected in the final statement.

1. Mentally retarded persons. Within our current agency mandate, we are required to serve directly only people who are classified as mentally retarded. That constraint should be reflected in the ENCOR purpose statement.

2. Comprehensive services. The agency provides programs in the areas of educational, vocational, residential, and other social services. These services are part of its purpose.

3. Movement toward independence. Our common goal is to assist people to become less dependent on agency support. That process can be measured by client movement to settings or environments not created by or supervised under ENCOR auspices.

4. Integration. Ultimately, we strive to move clients to those settings in the community that are available to all, or most, members of the community. This goal reflects the high value placed on "integration" by agency workers.

5. Adaptive use of normal environments. It would be pointless for ENCOR to move retarded persons to settings that were not conducive to further growth or were detrimental to the maintenance of previously acquired adaptive skills. Consequently, the purpose statement should refer, succinctly, to the goal of clients' adaptive use of normal environments.

After much debate and discussion, the following statement of purpose was selected to describe the broadest goal of ENCOR, which is to:

> Move mentally retarded persons to the use of the same educational, vocational, residential and other social environments available to all citizens within a community independent of ENCOR support.

It naturally follows, then, that the specific purpose of the agency program components is to prepare persons to meet the overall purpose related to client movement. And other components of the agency must take on the specific goal of being at the interface of "ENCOR" environments and general "community" environments in order to facilitate the progressive movement of the retarded person.

Even a literal person such as myself can live with a description of purpose such as this one. A set of measurable outcome and process objectives can be developed and directly tested against the general statement. The purpose implies how we will know when the job is done. And, very importantly, it implies what things are counter to our purpose (such as, assisting in movement to institutions or unnecessary nursing homes). A good purpose statement will also help members of an organization clearly identify compromise decisions; certainly it will make compromises harder to rationalize away as legitimate courses of action.

In Nebraska, we work under a state law that mandates local school district responsibility for all school-age children, regardless of degree of handicap. The law allows the districts two options in meeting their obligations: (1) provide the educational service directly; and (2) contract with other districts or approved agencies to provide the service. As an "approved" agency, ENCOR could continue indefinitely in the business of providing educational services to school-age children. Such a strategy could indeed help perpetuate the need for our agency and might even be financially beneficial to our overall operation. But tested against our stated purpose, this strategy would be clearly hypocritical. Our purpose will not allow us to offer parallel educational services in perpetuity. Instead, we plan to serve a transitional role, filling gaps as long as those gaps exist, but working continuously to encourage other, more generic community services to include mentally retarded citizens among their regular clientele. This strategy applies not only to a posture toward public schools, but toward other elements in the community as well, such as the YM/YWCAs, neighborhood housing, public transportation, community colleges, and business.

What might be the transition strategy of an agency that provides "education in a non-school setting"? During the interim between no service and public school provision of service, we have worked to develop a community system that could be potentially adapted by the public schools. Certain desirable characteristics of the system were identified. That is, the system should (1) produce measurable student growth, (2) elevate the image of the students and teachers, (3) stress student movement to more normal settings, (4) incorporate consumer participation, and (5) be affordable. Each year we have improved the system along each of these dimensions. The job is far from complete, and may never be. Which suggests a sixth characteristic of any good educational system: that, like its students, the system itself grows and develops.

But no matter how competent we might become in providing direct services to school-age children, parents and workers associated with ENCOR must face a final, sobering reality: the children we serve are there because, for one reason or another, they are excluded from direct public school participation. The inevitable interpretation imposed on the children will be that they are somehow not "good enough" for the public schools. The impact of that interpretation could well override subtle debates over relative curriculum sophistication or teacher competency. Contracted educational services are, indeed, what Bill Bronston* called an "aneurysm of the public school system" attached but not really integrated, an unnecessary eddy on the mainstream of education.

The very existence of "education in non-school settings" represents a community-wide compromise when those programs parallel public services available to most

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* Dr. William Bronston, Special Consultant, Division of Community Health Services

children or adults in that community. Agencies providing such parallel services should consider their corporate purpose very carefully and examine the degree to which they might be supporting an exclusionary and isolationist community policy toward a segment of the population, such as mentally retarded citizens. Those of us associated with ENCOR hope that we are not parties to such an unconscious conspiracy. Our examination of purpose has helped us feel a little more secure in this regard.

EDUCATION SERVICE DELIVERY - WHAT ARE THE ISSUES?

by

Edward T. Wilson
Bureau of Education for the Handicapped
Washington, D.C.

April 1, 1975

It is indeed a great pleasure to be here with you to exchange thoughts relative to the education of severely and profoundly retarded students and to share with you the position that the Bureau of Education for the Handicapped has taken to direct educational training services to severely handicapped children and youth.

There exists among the handicapped those children and youth whose physical, mental and/or social skills have been so limited that they have been largely overlooked in the provision of services. Because they are so severely handicapped, all too often they have been abandoned to survive as citizens in name only.

The Bureau of Education for the Handicapped has established as a broad goal, the provision of equal educational opportunities to all handicapped children. In order to realize this goal with respect to severely handicapped children and youth, the Bureau adopted the objective to enable such children and youth to become as independent as possible thereby reducing their requirements for institutional care and providing opportunity for self-development. Though traditionally the responsibility for providing educational service to the handicapped has been delegated to state and local school districts, it is apparent that the relatively small and geographically scattered incidence of severely handicapped children and youth in the population requires a planned and coordinated system if limited resources are to result in establishing effective services.

Severely handicapped children and youth generally do not receive educational services in the public school systems, except in large metropolitan school districts having special schools for such persons. Some educational services are provided to these children by state or private agencies. However, educational services are only one aspect of the comprehensive services required by these children. Social and family counseling, psychological and physical health services, self-care training, employment guidance and placement needs, must also be met if these children are to have the opportunity to develop to their full potential. The severely handicapped child requires highly specialized personnel; concentrated, and often individual attention and instruction; special facilities and materials; and curricula tailored to meet his exceptional needs.

It is estimated that nearly one million severely handicapped children and youth are totally excluded from the educational system of our nation. At least three hundred thousand others are not receiving adequate services. The principle problems delimiting delivery of effective educational training services to severely handicapped children and youth in those areas where such services are mandated or supported include: 1) an extensive deficiency of personnel with expertise and experience; 2) a lack of adequate functional facilities; 3) a general void of appropriate curriculae, methodologies, and educational training programs; 4) a scarcity of specialized materials and equipment; 5) a limited number of identification, diagnostic, descriptive, and placement services; and, 6) a general apathy or lack of concern for the needs of such persons, as well as the near non-existence of advocacy groups organized and functioning on their behalf.

The extreme shortage of adequate facilities, staff, and programs has, in many instances, limited placement options for severely handicapped children and youth to already over-populated institutions where, due to lack of funds, facilities, and staff, it has been impossible to provide little more than custodial service. Under more fortunate circumstances there may be more appropriate programs at institutions and a variety of education training service capabilities in home communities through mental health clinics, group homes, half-way houses, and interim care placement centers. However, few states have implemented community oriented techniques. The Rosenberg Report, a study in New York state in 1969, found that almost one third of the retarded children and adults institutionalized by the state could be placed in the community if there were appropriate mental health and day school facilities for them. At the present time, adequate facilities for such placement are very limited. Among the most isolated of all severely handicapped children are those who reside in the nation's training schools for the retarded and mental hospitals for the emotionally disturbed. Many of these institutions are located far away from any developed community. Those in larger cities are often relatively isolated or in inconvenient locations. Children in these institutions rarely leave the grounds of the facilities and are almost never given the opportunity to participate in the educational program of a local school district.

The Bureau of Education for the Handicapped has been particularly interested in launching a concerted effort on behalf of the severely handicapped because of the demand and apparent need for services to this population, the difficult financial position of local and state governments, and the extent of successful activities conducted under the programs for deaf-blind children funded by the Bureau over the past several years.

There are many differences among the states and among professionals in their definition for severely handicapped children. For the purpose of the BEH thrust on behalf of this population to more clearly identify such children and youth and to provide added national visibility to their needs, the following work statement has been developed and is currently being utilized by the Bureau:

> A severely handicapped child is one who because of the intensity of his physical, mental or emotional problem, or a combination of such problems, needs educational, social, psychological and medical services beyond those which have been offered by traditional regular and special education programs in order to maximize his full potential for useful and meaningful participation in society and for self-fulfillment. Such children include those classified as seriously emotionally disturbed, schizophrenic or autistic, profoundly and severely mentally retarded, and those with two or more serious handicapping conditions, such as the mentally retarded-blind, and the cerebral palsied-deaf. Such severely handicapped children may possess severe language or perceptual-cognitive deprivations and evidence a number of abnormal behaviors including failure to attend to even the most pronounced social stimuli, self-mutilation, self-stimulation, manifestation of durable and intense temper tantrums, and the absence of even the most rudimentary forms of verbal control. They may also have an extremely fragile physiological condition.

In a desire to impact on the needs of severely handicapped children and youth, the Bureau developed two RFP's which were announced in January, 1974. Telecommunications for severely handicapped children and youth who are home-bound was designed to explore the effectiveness of modern telecommunications technology and the provisions of educational training services to those severely handicapped children and youth who are home-bound due to restricted mobility or to other aspects of social performance or physical involvement. In response to this RFP nineteen applications were received, out of which five were selected and funded as of July 1, 1974. The second program, "Program for Severely Handicapped Children and Youth," provided for the funding of projects which would provide services in conjunction with relevant public and private agencies and organizations within a state. These proposals were asked to respond to the following:

A. A plan for comprehensive service designed to meet identified developmental needs of severely handicapped children and youth.

B. A model demonstration program providing direct educational or training services for these children and youth which can ultimately be replicated state-wide and throughout the nation.

C. A dissemination strategy whereby information about exemplary program activities and elements will be made widely known to both professional and non-professional personnel working with, or interested in the education/training of severely handicapped children and youth. In response to this RFP, 42 proposals were received with ten being selected for funding beginning July 1, 1974.

In a statistical overview of the fifteen programs, we have a total of 933 children participating including the severely mentally retarded, severely emotionally disturbed and the multi-handicapped. We have 46% of those students who are severely mentally retarded, 26% who are severely emotionally disturbed and 28% participating with multiple handicaps.

In view of the progress of the on-going program, BEH found it imperative to extend to state departments of education, private, non-profit agencies, and applicants interested in the services to the severely handicapped children and youth an RFP directing attention to specific target population for funding for FY-75-76. The six areas of concern were: 1) oral impairment; 2) emotional disturbance; 3) orthopedic impairment; 4) visual impairment; 5) profoundly retarded children, zero through early childhood; and, 6) profoundly retarded youth.

I will list the on-going programs* for severely handicapped children and youth and will extend to you an invitation to contact the program and see what they are doing. The telecommunication efforts include the Purdue Research Foundation; the University of Kentucky, under the leadership of Dr. James Tawney; City University of New York, Teaching Resource Center; The Regents of the University of the State of New York; New York State Department of Education; and, Health Development and Service Corporation, Salt Lake City. Other programs include the University of Alabama; California State Department of Education; Indiana University Foundation; the University of Kansas; University of Michigan; Esperanza Para Nuestros Ninos, Albuquerque, New Mexico; Oregon State Systems of Higher Education; Easter Seal Society for Crippled Children and Adults of Rhode Island, Providence, Rhode Island; University of Washington, under the leadership of Dr. Norris Haring. We also have the Madison Public Schools Joint District No. 8, in Madison, Wisconsin.

I would like to thank you for your attention.

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* Detailed information on these projects is contained in attachment to paper.

TELECOMMUNICATIONS FOR SEVERELY HANDICAPPED CHILDREN AND YOUTH WHO ARE HOMEBOUND

Purdue Research Foundation

Project Director

Dr. Robert Currie
Telecommunications for Severely Handicapped Children and Youth
Purdue Research Foundation
West Lafayette, Indiana 47907

Target Population

By location: A total of 50 children from the metropolitan areas of Lafayette, Indianapolis, and Kokomo

By type handicap:
33 profoundly/severely mentally retarded
10 cerebral palsied-physically handicapped
7 autistic

By ages:
50 - ages 0-3

Objectives

1. To reduce the probability of institutionalization for severely handicapped children, and
2. To prepare these children for entering educational and/or community programs for the handicapped.

These objectives will be implemented through the provision of instruction to parents of the severely handicapped, homebound children, utilizing closed-circuit television educational programming. The project will produce videotapes of 80 of the most critical learning needs of the pre-school severely handicapped.

Significant Features

1. Identification, assessment, and programming for individual infants, birth through three years of age, along with appropriate parent counseling and training.
2. Designing, producing, and distributing videotaped instruction programs in three critical areas of development: self-help skills, language development/sensory stimulation, and motor skills.
3. Evaluating the effectiveness of individualized telecommunications programming in aiding and facilitating developmental progress such that the two major objectives may be accomplished.
4. Equipment for television reception - normally not to include TV receiver - will be provided by the project. Programs will be delivered using extant cable TV systems, an ITFS (2500 MHz) system, and video cassettes in areas where the first two are unavailable. An interactive or talkback system (telephonic) will be utilized.

University of Kentucky

Project Director

Dr. James Tawney
University of Kentucky Research Foundation
305 Kinhead Hall, East Wing
Lexington, Kentucky 40506

Target Population

By location: a total of 18 severely mentally retarded children from the Lexington metropolitan area

By type handicap:
18 severely mentally retarded children

By ages:
8 - ages 0-3
8 - ages 4-8
2 - ages 9-12

Objectives

To develop an electronically programmed environment for preschool education of children with severe mental retardation and attendant multiple handicaps, through which such children can be provided an appropriate instructional and habilitative service.

Significant Features

Instructional devices linked to a centrally located, computerized teaching apparatus by telephone lines.

Instructional program designed for the individual participant.

Program transmitted over telephone lines to homes whereby programmed learning environments can be established.

Provision for instant telephonic interaction from home base to central point.

Provision for analysis of responses at the end of each teaching session, permitting project staff to modify curricula on a daily basis.

New York State Department of Education

Project Director

Dr. Raphael E. Simches
Regents of the University of the State of New York
55 Elk
Albany County, Albany, New York 12224

Target Population

By location: estimated total of 80 severely multi-handicapped children from the Buffalo, New York metropolitan area.

By type handicap:
Estimated 80 severely multi-handicapped children.

By ages:
80 - ages 4-21

Objective

To demonstrate the effectiveness of computer-based instruction delivered via closed circuit television to severely multi-handicapped children and youth.

To demonstrate viability of telecommunications model in metropolitan areas with already established cable television capabilities

Significant Features

Provision of interactive response capability between participating children and youth, children and centrally based master teachers, and between parents.

Utilization of audio-visual graphic and other visual programming in an interactive TV system, coupled with computer based instructional technology.

Teaching Resource Center, City University of New York

Project Director

Dr. Jim Jennings
Teaching Resource Center
City University of New York
144 West 125th Street
New York City, New York 10027

Target Population

By location: an estimated total of 30 severely emotionally disturbed children from the New York City metropolitan area.

By type handicap:
Estimated 30 severely handicapped - emotionally disturbed children.

By ages:
30 - ages 4-8

Objective

To determine how and to the extent that telecommunications can aid in the development of severely emotionally disturbed children.

Significant Features

Proximity to highly qualified and experienced personnel and progressive, educational environment for experimental design of educational intervention.

Utilization of interactive response system, employing cable television as an instructional media, coupled with video-taped, computerized educational programming.

Utah State University

Project Director

Dr. Alan Hofeister, Project Director
Exceptional Child Center
Utah State University
Logan, Utah 84322

Target Population

By location: total 123 participants.
38 homebound children never in school before.
60 day training center children receiving follow through help by parents.
25 children and youth from workshops or special education classes with special needs.

By type handicap:
63 children/youth - profoundly/severely mentally retarded.
60 multiply handicapped children and youth.

By ages:
- 30 - ages 3-6
- 23 - ages 7-12
- 18 - ages 13-17
- 52 - ages 17-21

Objectives

1. To develop a model program for delivery and utilization of parent-training modules of educational technology.
2. To assist parents with the provision of appropriate and progressive training of their homebound severely handicapped children and youth.
3. To establish a coordinated thrust to impact upon the needs of the target population through concurrent operation of a teacher training program for regular classroom teachers studying via self-teaching packets, to become special education teachers.
4. To adapt or modify as needed the parent training packets developed under another Federal grant, to the extent by which such teaching packets can be utilized on more severely handicapped children.

Significant Features

1. Utilization of the telephone in establishing direct, and frequent parent-master teacher conferences and assistance.
2. Utilization of extensive library of parent packages designed to assist as needed; field testing such packets for validity.
3. Coordination with University Affiliated Facility for the mutual advantage of each program.
4. Model for training or parent interveners - persons who assist parents in understanding and utilizing the parent training packets.
5. Cooperation of local educational agencies; state special educ. dept.
6. Coordination with other telecommunication projects in sharing information, utilizing educational modules developed elsewhere and modifying them as needed.
7. Well developed and carefully implemented research component in the development and validation of parent training packet material.

PROGRAMS FOR SEVERELY HANDICAPPED CHILDREN AND YOUTH

The University of Alabama

Project Director

Dr. Bobby Palk, Project Director
Post Office Box 2592
University, Alabama 35486

Target Population

By location: There is a total of 68 children and youth participating in the program. Forty-five students are bused by three vans daily and twenty-three are transported by parents from adjacent areas.

By type handicap:
- 24 severely mentally retarded
- 23 severely emotionally disturbed
- 21 multi-handicapped

By ages:
- 16 - ages 0-3
- 29 - ages 4-8
- ages 9-12
- 23 - ages 13-18
- ages 19-

Objectives

To provide exemplary educational services to severely handicapped children and youth between the ages of 0-19. To establish a cooperative interrelationship with the local education agency in order to influence replication of the demonstration model.

Significant Features

1. Parents of the population group plan a significant participating role in instructional program, assessment, home training, and evaluation components.
2. Performance data is maintained on each participant daily in an effort to plot progressive movements through the instructional modules.

California State Department of Education

Project Director

Dr. Don Ashurst, Project Director
Diagnostic School for Neurologically Handicapped Children
4339 State University Drive
Los Angeles, California 90032

Target Population

By location: Children are from southern California.

By type handicap:
11 severely mentally retarded
22 severely emotionally disturbed
17 multi-handicapped

By ages:
10 ages 0-3
19 ages 4-8
6 ages 9-12
15 ages 13-18
0 ages 19-

Objectives

A plan to establish demonstration educational service centers for severely emotionally disturbed children and youth. It provides for a differential psycho-educational assessment model to develop interventions into each SED child; the opening of nine classes for SED children; the training and staff development of LEA personnel responsible for pilot class; supportive services, including demonstration class, consultative follow-up services, assessment; demonstration and dissemination of program findings; and program monitoring.

Significant Features

1. The close working relationship between state/local agencies as well as the state's ability to respond quickly and effectively to state legislation affecting LEAs.
2. The comprehensive assessment capabilities of the project are potentially noteworthy as well as the potential for disseminating the model.

Indiana University Foundation

Project Director

Dr. Dennis R. Knapczyk

Programs for Severely Handicapped Children and Youth
Indiana University Foundation
Post Office Box F
Bloomington, Indiana 47401

Target Population

By location: 30 children from throughout the state of Indiana.

By type handicap:
30 emotionally disturbed children.

By ages:
15 - ages 8-12
15 - ages 4-8

Objectives

To develop alternate models for the deinstitutionalization of severely emotionally disturbed children and youth within the state of Indiana. Each model will undergo three stages of development:

1) Design and implementation in a controlled setting.
2) Modification and implementation in a supervised state institutional setting.
3) Dissemination of alternative models for use in community-based settings.

Significant Features

1. Identification of the population institutionalized or who are at high risk of being institutionalized.
2. Assessment of the institutions, communities, and severely handicapped persons.
3. Design of prescriptive child and community training programs which facilitate transition.
4. Evaluation of the transition process and feedback to the cooperating institutions and communities.

University of Kansas - Parsons State Hospital and Training Center

Project Director

Dr. Charles Spellman, Project Director
Parsons State Hospital and Training Center
Parsons, Kansas 67357

Target Population

By location: Total of 32 children and youth; 24 from Parsons Training School being deinstitutionalized with trainable retarded children in public schools; 8 from community, all of whom have had no previous education including 1 preschool child living 70 miles away who is brought once a week by parents to project.

By type handicap:
16 severely retarded
14 multihandicapped

By ages:
1 - ages 0-3
3 - ages 4-8
11 - ages 9-12
15 - ages 13-18

Objectives

To develop an operational model for delivery of educational services to severely handicapped children and youth in rural areas. The project uses a system technology approach to accomplish the objectives under management, communications, curriculum, and program technology personnel.

Significant Features

1. Comprehensive language communication system for severely handicapped, 13 oral, 4 non-oral communication programs encompassing a total language continuance for the young to adult SMH individual.
2. Survival skills training; domestic skills training.
3. Acquisition and utilization (with modification as needed) of skill training packets from the Portage project, Project MORE, and projects for severely handicapped at Madison, Wisconsin, and University of Washington.
4. Coordination model in work with local communities departments for special education, State Department of Special Education, University affiliated facility; P.L. 89-313 project.
5. Pupil assessment program - initial assessment and progress assessment procedures, utilizing T.A.R.C. Assessment Inventory for young children to initially assess their learning needs. This information is fed into the computer which provides behavioral objective determination and curriculum suggestions. Assessment for older children conducted on Camelot program, which is geared for severely handicapped development; use is also made of Portage guide check. Language checklist and general assessment battery has been developed.

The University of Michigan

Project Director

Dr. Lawrence J. Turton, Project Director
The Regents of the University of
Michigan, ISSMD
1030 South 1st Street
Ann Arbor, Michigan 48105

Target Population

By location: The students are transported from Ann Arbor and neighboring areas.

By type handicap:
- 0 severely mentally retarded
- 0 severely emotionally disturbed
- 14 multi-handicapped

By ages:
- 0 - ages 0-3
- 8 - ages 4-8
- 5 - ages 9-12
- 1 - ages 13-19
- 0 - ages 19-

Objectives

To develop a demonstration model classroom program and transitional treatment center for severely handicapped children in cooperation with the local educational agency. The program model will be utilized to stimulate the development of similar programs state-wide.

Significant Features

Demonstration classroom and transitional treatment center. Close cooperation and coordination with the family. Role of parents as decision makers. Monthly home visits. Parent seminars - media packages.

Esperanza Para Nuestros Ninos

Project Director

Mrs. Ruby Luna, Project Director
Esperanza Para Nuestros Ninos
P.O. Box 12212
Valdora S.W.
Albuquerque, New Mexico 87105

Target Population

By location: 8 from foster homes; 20 from state institutions for mentally retarded; 53 living with families - first educational intervention; 13 living with families - referred from public schools needing special education.

By type handicap:
90 profoundly/severely retarded
4 multiply handicapped children with developmental delays

By ages:
32 - ages 0-3
34 - ages 4-8
15 - ages 9-12
13 - ages 13-18

Objectives:

1. To develop a model program for severely handicapped children, in an area of associated bi-lingual and low-income problems.
2. To establish a model for a non-public, non-profit organizational development of such services.
3. To implement an exemplary parental intervention procedure.
4. To implement recent, successful training procedures.

Significant Features

1. Integration of physical, speech, and occupational therapy in interaction with severely handicapped children and youth.
2. Integration of the three therapies with an "academic" learning program.
3. Early intervention with target population - infants through young adult.
4. Extensive parental involvement in development and implementation of teaching program; great parental interest and support.
5. Unusual success in coordination with local agencies providing services to handicapped children and youth, with university personnel and State Department staff members.

Teaching Research Division - Oregon State System of Higher Education

Project Director

Dr. Victor L. Baldwin
Teaching Research Division
Oregon State System of Higher Education
Monmouth, Oregon 97361

Target Population

By location: Total of 25 children from Monmouth, Corvallis, Salem and adjacent city school districts.

By type handicap:
14 severely emotionally disturbed children.
11 multi-handicapped-cerebral palsied children.

By ages:
5 - ages 0-3
8 - ages 4-8
2 - ages 9-12
10 - ages 13-18

Objectives

1. To develop a model demonstration program of education and treatment of severely handicapped children.
2. To develop a state-wide planning document for providing services to the seriously emotionally disturbed and the severely/profoundly retarded and multiple handicapped and to evaluate the effectiveness of this plan.
3. To establish a group home for severely handicapped children and youth and determine viability and economic efficiency of this model of child-youth placement.

Significant Features

1. Comprehensive model of education/training of severely emotionally disturbed children and youth.
2. Curriculum development and validation for providing educational services to target population.
3. Coordination with related federal/state and local projects serving severely handicapped children.
4. Supportive role of teacher preparation programs providing skilled educators of severely handicapped children.
5. Meaningful parental involvement.

Meeting Street School
The Easter Seal Society for Crippled Children and Adults of Rhode Island, Inc.

Project Director

Mrs. Barbara Fazzano, Project Director
Meeting Street School
333 Grotto Avenue
Providence, Rhode Island 02906

Target Population

By location: Students are bused to project site daily from Providence metropolitan area.

By type handicap:
0 - severely mentally retarded
0 - severely emotionally disturbed
55 - multi-handicapped

By ages:
25 - ages 0-3
22 - ages 4-8
8 - ages 9-12
0 - ages 13-18
0 - ages 19-

Objectives

To utilize a multidisciplinary model to demonstrate for Rhode Island and the New England area, educational practices which will enable community development of programs for severely handicapped children and youth.

Significant Features

A demonstration program providing identification, diagnostic and prescriptive services. Components include: Early diagnostic intervention, behavior management training, prevocational training counseling for students, parents, and teachers, parent-child involvement, inservice training for staff and parents, and dissemination efforts.

University of Washington

Project Director

Dr. Norris G. Haring
Programs for Severely Handicapped Children and Youth
Experimental Education Unit, WJ-10
Child Development and Mental Retardation Center
University of Washington
Seattle, Washington 98195

Target Population

By location: 207 seriously emotionally disturbed children and youth from the Seattle metropolitan area.

By type handicap:
207 severely and profoundly retarded, severely emotionally disturbed, and multiply handicapped children and youth.

By ages:
28 - ages 0-3
73 - ages 4-8
25 - ages 9-12
36 - ages 13-18
45 - ages 19-

Objectives

To develop a model program of educational and other needed services for severely and profoundly handicapped children and youth, including screening and placement procedures, pre and inservice training for project staff and related persons, parental involvement, multidisciplinary and multi-agency involvement in the delivery of services, involvement in dissemination and evaluation procedures.

Significant Features

1. Exemplary demonstration program in two settings: Experimental Education Unit at the University of Washington, and at the Lake Washington Special Education Center.
2. Plans for replication of demonstration model, in public school programs in Seattle, Tacoma, Edmonds, and Issaquah; the third year includes plans for development of replications in more remote areas of the state.
3. Screening program to make initial determinations of extent and nature of handicaps among the intended population of project.
4. Development of pre-vocational and vocational situations corresponding to training and abilities of participants.
5. Development of full and sequential learning experiences for target children/youth (curriculum components), assessment procedures and tracking system and project evaluation.

Madison Wisconsin Public Schools

Project Director

Dr. Tim Crowner, Project Director

Project MAZE
Badger School
501 East Badger Road
Madison, Wisconsin 53713

Target Population

By location: Total 185 children and youth: 16 preschool children living at home - first time in educational program; 4 boarding school children; 20 children in foster home placement; 145 severely handicapped children living at home (some with prior partial education).

By type handicap:
72 profoundly/severely retarded
113 multiply handicapped

By ages:
16 - ages 0-2
13 - ages 3-5
43 - ages 6-9
38 - ages 10-12
49 - ages 13-18
26 - ages 19-21

Objectives

1. To demonstrate a model for community-based training/education of the severely handicapped child.
2. To develop curricular modules for shaping behavior of such children.
3. To demonstrate a model for deinstitutionalization.
4. To serve as an advocate for the severely handicapped through demonstration of effective training and eventual employment of such persons.

Significant Features

1. Development of specialized curricular modules for training of severely handicapped children and youth.
2. Integration of severely handicapped children and youth into environments less structured in nature, to the inclusion of children in (a) special, (b) special class, (c) resource room approach, (d) integrated class in public school.
3. Coordination with a university training program for teachers of severely handicapped children.
4. Coordination with local educational agencies and state department of special education; conducting of special "orientation program" for administrators of public schools, to acquaint them with potential for severely handicapped.
5. Assessment program for student initial evaluation and continuing progress monitoring.

PARENTAL INVOLVEMENT IN THE EDUCATION
OF THE "24-HOUR RETARDED CHILD"

by

Frances Bicknell
Wisconsin Association for Retarded Citizens
Middleton, Wisconsin

April 1, 1975

Mr. Chairman, Ladies and Gentlemen, Parents and Friends of the "24-Hour Retarded Child":

I am pleased to be here to participate in this conference. I am particularly grateful for the phrase, "The 24-Hour Retarded Child". Perhaps it will help us think about the educational needs of these children and to avoid the stereotypes often associated with the concept of "severely and profoundly retarded children". I think this definition makes it very obvious that we are thinking in broader terms these days.

I would also like to share one thought with you that I have had many times. I sometimes think that parents of handicapped children have two major tasks: First, to teach their handicapped children how to generalize from specific experiences, and second, to persuade professionals and others not to generalize. We must learn to understand and respect the complex combinations of abilities and disabilities which these children possess.

Types of Parental Involvement in the Education of Handicapped Children

I would like to give you what I think are eight types of parental involvement in the education of handicapped children. And, I would like to add something to this that I realized when our previous speaker, Mr. Wilson, was speaking. Many of our minority citizens have not had the opportunity to speak for their children as parent-advocates. If you are going to be an effective parent-advocate, you have to spend almost full time at it. It is helpful to have a husband who is willing to support you, a second car, and a fairly good education. A rather "tall order".

These are the eight areas where I see strong parental involvement.

1. Intensive involvement with one's own child - hopefully with skilled professional help as needed - in the formative early developmental stages of growth. We must remember that:

   a) The need for early stimulation is greater than that of normal children.

   b) The need for stimulation and special teaching skills lasts longer than for normal children including the special teaching skills that parents, as well as teachers, have to develop.

   c) Tasks must be divided into small, easily learned, segments. Dr. Frank Hewitt of UCLA stated at an early national conference of the National Society for Autistic Children that this concept of dividing tasks into small segments was perhaps the major contribution of the use of behavior modification techniques. Parents often use a reward and punishment system intuitively but find it difficult to apply it to a child who doesn't seem to respond to the "system".

2. Second, many parents have needed to organize, make policy and help administer day care and educational centers for their children who are excluded from the public schools. Parents have participated in everything from janitorial duties to staff selection and budgeting. This has been a lot of work for parents, but also good training.

3. Three, parent-teacher conferences and home-school cooperation in setting goals and sharing techniques for education and training. Frequent communication is essential, especially for the parents and teachers of non-verbal or language impaired children.

I would just like to comment here on the professional malpractice suits that Dr. McGrew mentioned, and all the litigation that other speakers have mentioned. If we can establish this "working together" relationship early in the game, between parents and professionals, I think that we will avoid a lot of the litigation. We have to recognize that teaching is an art, it is not a science. We cannot guarantee results. We have to know that we are working together for a common goal.

4. The fourth kind of parent involvement is membership in parent groups organized around disabilities, of which the ARC is perhaps the prime example. These groups offer emotional support and parent education for all aspects of parental involvement.

5. The fifth kind of parental involvement, is the kind that Dr. McGrew mentioned. The Madison Public Schools have a special education advisory committee to advise the Board and the Administrators. These groups have representatives from other handicapping conditions, as well as other citizens, and offer:

a) A broad understanding of the range of special education needs.

b) Citizen-consumer influence on policy decisions.

c) Support for education budgets and understanding of need for priorities in the budgeting process.

I would like to comment that Maxine Clausen, Chairman of the Special Education Advisory Committee in Madison, Wisconsin, and is here at the conference, and has a limited supply of Guidelines developed by that group for those who may be interested in starting such a group.

6. Another type of parental involvement is the formal or informal coalition of parent groups not directly related to a specific school district. This coalition may work on various issues, such as development disability legislation, protective service legislation, and rights in general (like the right of handicapped persons to vote even if they do not have access to the voting booth).

In Madison, our informal parent coalition has only one general meeting a year but has distributed a directory of parent organizations and other resources, and has demonstrated broad support for state legislation to benefit disabled citizens.

7. Intensive involvement of some parents in actually drafting legislation and working for its passage.

8. And last, membership on State Advisory Councils for Special Education charged with policy review in the formation of rules and guidelines for the implementation of legislation (with the inevitable corollary of increased interest and involvement in appropriate funding mechanisms and levels of funding).

A Personal Note

I would like to give a one paragraph personal note to help you understand my background and frame of reference. We have a totally blind, retarded and autistic son who was nearly eighteen years of age and who was attending a small, educationally oriented day care center at the time of the landmark Pennsylvania decision in 1971. All the staff members of that day care center were well trained, but not necessarily certified. I would like to stop here and thank Dr. Tawney for his comment on the use of all our trained people because I agree that we are going to have to use all our resources. This day care center had been forced to pioneer in individualized instruction because it was catering to exempted children. Obviously, when you are dealing with children who have been excluded from the public schools, you are not going to have any two who are alike. Perhaps, this was a blessing in disguise, at least it encouraged individualized programs.

However, it became more and more obvious that all children who were excluded from the public schools were not going to receive educational opportunities until education for the severely mentally handicapped was a constitutional right and not regarded by society as "treatment" or a social service. Somewhat naively perhaps, we hoped that we could help to write mandatory education legislation that would allow flexibility and individualization in meeting the needs of the "24-hour retarded child" as well as others with special education needs.

Parental Involvement in Writing and Passage of Wisconsin's Chapter 89, Laws of 1973, was intense!

1. "Chapter 89" has become a byword in the State of Wisconsin. There was heavy parental involvement in the writing of that bill. We used as our "Bible" the Council for Exceptional Children's book, State Law and the Education of Handicapped Children, by Weintraub, Abeson, and Braddock. Parents from advisory committees in Madison and Milwaukee read, discussed and exchanged memos with professional special education personnel from local districts and from the Department of Public Instruction. Consensus positions were communicated directly to Judi Greenberg, the Legislative Reference Bureau attorney who drafted the bill. Senator James Devitt and Representative Midge Miller, chairman and vice-chairman respectively, of the sub-committee appointed to write the proposed legislation, invited these parents and professionals to participate in the mark-up sessions on the bill.

Most of the CEC inspired recommendations were embodied in the law. Parents had also proposed a change in funding patterns to neutralize fiscal considerations when making placement decisions for the individual child. This was vetoed, primarily for political reasons. Many felt it would be easier to assure passage if legislators could be assured that funding and the existing delivery system would remain essentially the same.

2. Parents and professionals worked cooperatively with representatives from the School Boards Association and other groups to assure statewide support for the bill. Broad support ensured a wide array of arguments in favor of the bill. Two of the arguments were closely related to the needs of the "24-hour retarded child" - the court orders in the Pennsylvania ARC v. the Commonwealth of Pennsylvania case in 1971 and the cost comparisons of a child in an institution for $10,000 or $12,000 a year versus the cost if the child could live at home and go to school - perhaps $1,500 to $3,000 at that time, depending on the level of disability.

Major Provisions of Chapter 89, Laws of 1973 (with references, Wisconsin Statutes)

1. "Child with exceptional educational needs means any child who has a mental, physical, emotional or learning disability which, if the full potential of the child is to be attained, requires educational services to the child to supplement or replace regular education...." s.115.76(3)

2. Compulsory school attendance laws apply to children with exceptional educational needs. (Previously had not applied to mentally handicapped.)

3. School districts mandated to ensure that appropriate special education programs are available to children with exceptional educational needs, ages three to twenty-one. (May provide special education under age three.) s.115.85(1)

4. Appropriate placement may be made in programs: s.115.85(2)

   (a) Operated by the school district, county of residence or cooperative educational service agency.

   (b) Public in-state program as close to child's home as possible.

   (c) Public out-of-state program, with consent of state superintendent.

   (d) School board may, upon approval of the state superintendent and if no equivalent public program is locally available, contract with a private special education service whose governing board, faculty, student body and teachings are not chosen or determined by any religious organization or for any sectarian purpose. (Upheld by Wisconsin Supreme Court, June, 1974.)

5. Multi-disciplinary team evaluations are required for children referred for possible special education services. M Team must be composed of at least two persons who are skilled in assessment and programming for children with EEN (exceptional educational needs). s.115.80(3)

6. Parental consent is required twice in the planning process, before the child is evaluated and before the child is placed in a special program. s.115.80(3) and s.115.85(2)

7. Parents have the right to appeal decisions related to special education with due process procedures carefully spelled out. s.115.81

8. Legislative policy preference is given, when appropriate, to education of the child in classes along with children who do not have exceptional educational needs.

9. A state advisory council was established with strong consumer representation to be consulted by the state superintendent on all policies and rules related to education of children with EEN. s. 15.337 and s.115.79(1) (a)

10. Developmental disabilities was added to the list of handicapping conditions. s.115.76(3) (b)

Education Service Delivery - What are the Issues?

1. What can normalization, or integration or mainstreaming mean for the 24-hour retarded child?

It can mean that we stop covering large geographical areas trying to find enough children "just alike" to form a class. We can recognize that severely and multiply handicapped children also may have less obvious perceptual disabilities which add to their uniqueness. We can consider their relative size, physical growth and level of functioning to be more important than chronological age. We can recognize that these children must have individualized instruction anyway, so why can't it be in small classes close to their homes and in a regular school setting? Most of these children will need diagnostic teaching for a long time. I have brought along copies of the Working Definition of Autism and Autistic Characteristics for each of you.* Just imagine all the possible combinations of disabil--ities that three blind retarded children could have! We have encountered many of these "combinations" over the years at the Portal Foster Center in Madison, Wisconsin.** Severely and multiply handicapped children need individually designed programs to meet their educational needs. In addition we have found unexpected bonuses! Our staff pioneered in the use of signing for mute retarded and autistic young people along with our deaf students, before the current vogue in the use of signing developed. The expressions of joy on the faces of persons previously unable to communicate in any way, show how their lives have been enriched. We need to establish small experimental classrooms to meet the needs of the "24-hour retarded child".

2. Problems related to rigid definitions and rigid certification standards.

I mentioned inclusion of developmental disabilities in the definitions as one of the important provisions of Chapter 89 simply because I think we should seize every opportunity to leave old habit patterns behind and force ourselves to look at individual abilities and disabilities.

An educationally oriented definition of developmental disabilities was introduced in an article in the February, 1974, issue of Exceptional Children by John T. Neisworth and Robert M. Smith.

> Developmental disability refers to significantly deficient locomotor, communicative, adjustive or academic functioning that is manifested during the developmental period, and that has continued or can be expected to continue indefinitely.

A definition like that should really encourage individual assessment!

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* (see attachment)

** The Portal Foster Center now serves adolescents and young adults

Neisworth and Smith included another concept in their article which might help us understand the 24-hour retarded child. "Even mild performance liabilities in several areas may cumulate to yield markedly retarded or distorted developmental progress". This offers a possible explanation for the child who "looks as if he should be achieving more than he is".

But their definition of developmental disabilities offers more than this - a chance to assess abilities and avoid presumption of retardation in the multiply handicapped. A cerebral palsied, essentially non-verbal child in our state was finally moved from a class for the orthopedically handicapped and mentally retarded to a total-communication class where he is functioning at grade level in arithmetic and reading, a hard-won Ch. 89 success story!

I also believe that certification standards must change to allow teachers to be judged on their competency in teaching individual children to make the most of their abilities and to minimize their disabilities. In the words of the CEC authors in their chapter on personnel, "expanding the competencies of special educators to facilitate individualization of instruction as opposed to categorical instruction".

3. The right of parents to be closely involved in the planning to meet their child's educational needs, and the right to access to all pertinent records.

The November, 1972, issue of Closer Look addressed this problem and called the parents the only "involved, caring monitor" who can follow the child's progress throughout life (at least into young adulthood in most cases).

The appeal process is a necessary part of the right to education laws but it should be seen as a last resort and not as a substitute for regular and effective communication with the child's teacher and other professionals involved in his or her well-being.

4. Funding patterns that will assure placement based on educational needs rather than fiscal considerations. It must also be recognized that it costs more to educate children with exceptional educational needs and that some type of excess cost formula is needed. State Law and Education of Handicapped Children recommends:

> The costs of educating a handicapped child beyond that of educating a non-handicapped child should be assumed by state government. However, the child's district of residence should be required to assume an expenditure for the child equal to that expended for a non-handicapped child, regardless of where the child receives an education.

These then are the current issues in the education of a 24-hour retarded child as seen from the perspective of a parent.

I would like to close with a quotation from Emerson: "The secret of education lies in respecting the pupil". I believe that this respect helps us perceive the essential human dignity in each one.

BIBLIOGRAPHY

Madison, Wisconsin: Madison Public Schools, Guidelines, Special Education Advisory Committee, N.D.

National Society for Autistic Children. Working definition of autism, Albany, New York: The Society, 1973.

Neisworth, J. T., & Smith, R. M. An analysis and redefinition of developmental disabilities. Exceptional Children, February, 1974, Volume 40(5), p. 345-347.

Special Education Information Center. Closer Look, newsletter. National Special Education Information Center, November, 1972.

Weintraub, F. J., Abeson, A. R., & Braddock, D. L. State law and education of handicapped children: Issues and recommendations, Arlington, Virginia: Council for Exceptional Children, 1972.

PREPARING EDUCATIONAL PERSONNEL FOR THE SEVERELY AND PROFOUNDLY MENTALLY RETARDED

by

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April 2, 1975

I do appreciate the opportunity to be a part of this conference, more as a member of the audience than as a presentor. It has been interesting to eavesdrop on the reactions of individuals to the presentations, and to participate in informal conversations with individuals representing views of parents and local agencies. As a presentor, what I feared from the beginning of this conference is coming true....

> the later one appears on a program
> the more redundant his remarks.

After each session, I have returned to the drawing boards in hopes of preserving a few unique points by rephrasing them. My first reaction was that when this occurred in the future, I would merely not attend the prior session and at least enter my presentation with confidence or select an irrelevant topic.

As the conference progressed, it became apparent that this factor is actually an indicator of the State of the Art regarding programming for the severely and profoundly retarded. We share common concerns and we acknowledge the infancy of the movement toward better services and increased knowledge.

On several occasions since agreeing to present at this conference, I have questioned the wisdom of my decision. I do not represent a department with an extensive track record of preparing personnel for the severely and profoundly retarded, nor have I personally been engaged in the training of such personnel. This is not to suggest that the University of Kansas is ignoring personnel needs in this area. Rather, it is an admission that our efforts are in progress. As I considered information available to me on programs at other universities, it became apparent that there may be merit in calling attention to some major concerns which center around program development in contrast to describing a program which exists.

Since I will be expressing some views which you may not share, a little additional information pertaining to our situation might be helpful. The Special Education Training program at the University of Kansas is a comprehensive program preparing personnel primarily at the graduate level in most areas of exceptionality except the visually handicapped. We are located in two settings, i.e., the Kansas University Medical Center in Kansas City and the main campus in Lawrence. The University is rather unique in terms of the number of resources throughout the University system which are also concerned with handicapped individuals. Most of you are familiar with activities of the Bureau of Child Research, Department of Human Development and Family Life, UAF, Juniper Gardens Project, and the Mental Retardation Research Center. There are also a number of programmatic research development efforts being carried out in related settings such as Parsons and the Kansas Neurological Institute. At the present time, we are engaged in the development of a competency based teacher training program for the severely and profoundly handicapped as part of a larger program development effort administered out of the Kansas Neurological Institute. The Special Education Department has a strong service orientation and provides direct service to children. It also conducts about 30% of its instructional offerings off-campus in public school settings. At the present time, we have restricted our efforts in the area of the severely and profoundly handicapped to researching competencies and training strategies. This program development is being headed by Don Horner. It will be a year before we truly begin to recruit students. I mention this information not to boast of our resources but to provide a frame of reference for some concerns which I hold and to make the point that it requires more than resources to actualize a program for the preparation of personnel to teach the severely and profoundly retarded.

Most of the sessions thus far in this conference have focused on topics related to curriculum development, the delivery of services, administrative arrangements, and strategies for teaching. Certainly, these are topics of importance - they are topics which make a difference. Inherent in these topics is the assumption that training programs for personnel preparation exist or that they can be established. In many cases, this may prove to be a false assumption.

I, too, am impressed with the successfulness of legislative efforts in bringing about new legislation to assure the rights of the severely and profoundly handicapped, but as a university type I am also somewhat fearful of possible consequences. For example, Kansas also has new legislation mandating programs for handicapped children. Inherent in the legislation is increased funding for transportation and instructional services but no support for personnel preparation. The net effect could be transporting more children faster to participate in ineffective instruction. Our legislation is not unusual.

This distresses me because of the obvious concern for preparing quality personnel, and because it could provide an out for local administrators unable to hire appropriately trainable personnel.

While we may be able to create instant authorities, we can't create instant teachers or training programs.

Sidney Bijou told it very aptly Monday night when he said, "We are talking about skills and interfacing behaviors which schools are not used to thinking about."

The same goes for teacher trainers. Developing sound training programs will be no easy task. To train certain personnel for professional roles in programming for the severely and profoundly handicapped requires a sustained "institutionalized" program in higher education or a quasi-relationship with a college or university. I am not suggesting that only colleges and universities can train personnel, but I am suggesting that institutions of higher education do have a major role to play in the preparation of personnel and that we don't want to assume that bona fide training programs will occur just because there is social agreement that a need exists for such personnel, or that individuals exist with a commitment to preparing personnel, or that advocacy efforts are organized, or that legislators have been influenced to pass legislation designed to mandate the delivery of services. We must remember that priorities are generated, to a degree contrived, and are constantly in the process of change. We can't rely on the status of a high priority to move universities to establish training programs for several reasons. First of all, they respond to a number of high priorities, many of which are not related to social concerns. Some priorities also have stronger constituencies than others. Secondly, by the time most institutions of higher education have organized their resources in order to respond, other issues have emerged and captured the attention of their social conscience. A more pragmatic approach is required.

This morning, I would like to share two perspectives. One relates to concerns centered around the process of establishing a new program for personnel preparation within the context of those factors impinging on today's university, and the other relates to observations pertaining to the process of training personnel given an established program.

Keep in mind that my perspectives are those of a department administrator.

Let me first define what I mean by program. To me an established program has at least the following characteristics:

1) It is not a one-person operation in terms of conceptualization, development, or maintenance.

2) It has access to needed resources and controls at least part of the resources, i.e., it is not totally dependent.

3) It is part of a larger structure with compatible goals, i.e., it has some protection.

4) It has the capabilities to be sustained, i.e., it is perceived as important to its parent department, and it has established interdependent relationships

with other training units.

Within this context, I would suggest that we have more colleges and universities preparing to train personnel to teach severely and profoundly handicapped individuals than we have colleges or universities with programs. To encourage or nurture anything less than program status is to introduce a risk in the quality of service delivered to our target population. Above all, we don't want to repeat our history of twenty years ago, when it seemed so right for every teacher's college in the country to train special class teachers for the educable mentally retarded. We have an opportunity to exercise some judgment in the establishment of quality control within the context of programs.

Assuming that we agree on the position that universities have a major role to play in the preparation of personnel to deliver services to the severely and profoundly handicapped, then let me share a number of concerns which add up to a perspective that the road to establishing sound training programs to prepare personnel for severely and profoundly handicapped is anything but paved. The process is not only more complex but it is destined to encounter more resistance. This has been experienced thus far in developing special education training programs within universities.

Point 1. The rapid expansion of programs experienced by special education during the past ten years is a poor predictor of the future in terms of adding additional training programs.

A. Circumstances have changed in higher education,

B. New positions are rare.

C. It is difficult to establish new courses let alone new programs.

D. Competition for university commitments of support (even moral support) is tough.

E. Productivity in terms of graduates and students enrolled is receiving increased attention.

F. Reallocation of resources is the by-word, but it doesn't always mean that the benefactors are the most deserving in terms of objective criteria.

G. The influence of accountability being forced on institutions of higher education has, in effect, diverted energies away from development to maintenance activities.

H. The public in general has grown more vocal in expressing its apprehension about the role of the university and/or its lack of knowledge about the functions of a university.

Point 2. The changing climate in higher education has come at a time in which departments of special education are experiencing large scale demands for personnel, they are trying to build congruence between their training models and changing philosophies in the delivery of services locally, and they are facing finite resources. These are causing departments of special education to:

A. Re-examine their goals.

B. Strive for efficiency in their curriculum by:

   1) looking at the skills of faculty members

   2) retraining professors is no small challenge

C. Attempt to be more responsive within existing resources.

D. Employ defense mechanisms in order to gain freedom to maintain quality.

Point 3. Departments of special education are not free to limit their response to their own priorities. They must also respond to priorities of the university. Unless the university is successful in attaining its priorities, departments lose their effectiveness.

Examples:

A. Outreach

B. Reallocation

C. Improvement of instruction

D. Undergraduate-graduate instruction

E. Credit production

Point 4. Universities respond to requests for graduates. If the need is high for engineers, we produce engineers. If the need is high for teachers of learning disabled children, we produce L. D. teachers. The need has to be real. It can't be predicted. The public has a low tolerance for speculation within universities. Programs are not allowed to train people for whom a market has not been established. In terms of the severely handicapped, an expressed need does not exist at a sufficient level to attract attention. At least not in comparison to requests for other special education personnel.

It is also not reasonable to assume that large numbers of persons want to teach the severely and profoundly handicapped. Even with good recruitment strategies, it is not likely that the number of applicants will be sufficient to cause universities to redirect resources on the basis of observed need. There are ways, however, in which the impact of need can be maximized. If we allow a proliferation of attempts to train personnel for the severely and profoundly handicapped, the demand will never exist to the point that individual universities can truly respond to demand as a basis for program development. The response must be based on another set of conditions. It is naive to assume that KU is going to redirect resources to a training program in this area at the expense of another program merely because our faculty can document need - the strategy is more involved.

Point 5. The role of faculty members in special education is changing. The kingdom-building days are disappearing. The chances of an individual faculty member conceiving an idea about a training model and nurturing it into a program through his own initiative are greatly reduced. As professors, we are being reminded that we are employed by universities for particular roles and not to create roles for ourselves. Unilateral effort is not being reinforced to the degree that departmental unity is. While there is merit in this approach, it does reduce the opportunity of new and different programs emerging as a result of individual effort. In times of austerity diverse efforts are expensive.

Point 6. The typical special education faculty, even in a comprehensive program, is not oriented toward the kinds of training strategies necessary to prepare teaching personnel for the severely and profoundly handicapped. Not only is the remediation model we employ with the mildly handicapped inappropriate, but most faculty members are totally inexperienced in dealing with the behavioral characteristics of the severely and profoundly handicapped. Thus, we are not necessarily talking about a program need for which support exists merely because the focus is on a handicapped population. Many departments can only academically relate to the needs of the severely and profoundly handicapped.

Point 7. It is unlikely that many universities will be able to independently underwrite the costs of quality training programs to prepare personnel for the severely handicapped. Most of the programs referred to during this conference are supported through federal funding. Remove either the program support funds or student support and continuation becomes speculative. At best, the continued program would be only an approximation of what is desirable.

These concerns come to my mind as I ponder the question of "How do we develop quality programs which will be sustained and which in the future will produce not only good personnel but new ideas and research on training strategies." These concerns lead me to argue in support of regional training centers. The idea of encouraging large numbers of colleges to prepare such personnel will not result in the kinds of resources we need. Federal assistance of a long-term nature is essential if universities are to commit themselves to the provision of resources necessary to prepare the kinds of personnel needed. Special projects and seed money are not sufficient. A network of regional training centers with assurance of long-term support would assure a sufficient population base to support a program. Recruitment procedures could be refined and aimed regionally. Above all, such an approach would allow for better utilization of resources. It costs money to make maximum use of resources such as those offered by institutions, community programs, clinics and research centers. Quality training programs for the severely and profoundly handicapped cannot be developed in isolation. They must be based in a setting with a wide range of training and service resources. Unfortunately, comprehensive university training programs which have the resources or have established relationships with related agencies possessing the needed resources are feeling the economic pinch of inflation. On the surface, one would assume that campus programs could easily accommodate one more training sequence. The facts of life are that sound programs don't emerge out of compromise. It will be a better future if we use our leadership to systematically establish a series of well-defined and adequately supported regional training programs.

My second perspective involves a series of concerns which are much more specific. They focus on the process of training teaching personnel to work with the severely and profoundly handicapped. These concerns relate to two observations. The first is the obvious observation that the behavioral characteristics of teaching severely and profoundly handicapped children dictate training strategies substantially different from those we have been applying in training personnel to teach the mildly handicapped. The second observation relates to the situation in which our graduate will ultimately be employed. The vast majority of graduates from current special education training programs take positions in school districts with a history of special education and with at least a reasonable compliment of support services. In the area of the severely and profoundly retarded, local districts and agencies are almost as naive in delivering services to this population as well as we are in preparing personnel to teach them. This is not an indictment of community programming. But these circumstances warrant our consideration as we conceptualize training programs and staff budgets.

Point 1. Instead of training teachers at a level sufficiently prepared to enter the profession, but dependent on the support of others whose role is to assist them in their teaching assignments, it seems to me that we must consider another alternative. The alternative is to focus on training highly competent persons to function as teachers, program developers, and trainers. In other words, the teachers entering the market during the next five to ten years may very likely have major responsibility for the quality control exercised in the programs for the severely retarded which employ them. With this in mind, their training should be much broader than teaching techniques. For example, I don't think we can depend on a supply of paraprofessionals adequately trained for meaningful participation in these programs. The teacher should be prepared to assume a leadership role training her own paraprofessionals. If we can resist the temptation of producing products quickly, and hold for the production of highly competent people who understand program organization as well as teaching techniques, we might avoid the pitfalls experienced in other areas of special education during their first years of growth.

Point 2. In terms of teacher training models, the competency based performance model is obviously attractive. The majority of behaviors for which teachers must be trained to influence lend themselves to the competency based model. In fact, when one analyzes the instructional needs of the severely and profoundly retarded, it appears that the competency based model may be more appropriate for training teachers of the severely and profoundly handicapped than for any other target population of learners. Because of these circumstances we could be easily seduced into over utilizing the model. In most competency based teacher education training programs, there has been a tendency to move toward a modular form of instruction which is highly individualized and which allows the student to move at his own pace. As logical as the system sounds, there are some inherent weaknesses when applied to a training program for preparing teachers of the severely and profoundly handicapped. I say this even though I have been extensively involved in competency based instruction and continue to be a proponent of the system when appropriately applied. First of all, the characteristics of the pupils require that teacher trainees have an extensive and intensive contact experience with the severely handicapped child during the process of their training. The nature of this contact must allow for immediate and continuous feedback to the trainees. I am not talking about written or oral evaluative feedback from an instructor at the conclusion of a module. I am talking about feedback during the process of interacting in a training experience with the child. We must resist the pattern of structuring competency based modules which are heavy on information.

There are other practices in competency based instruction which are applicable in some training programs but may not be as applicable in training teachers of the severely and profoundly retarded.

A. Training to criterion - a model requiring repeated training to criterion over time on the same skill may be more effective.

B. The deductive approach to identifying needed competencies. Too often more competencies are identified than can possibly be developed through a training program. A more precise empirical approach is needed to assure that teachers acquire the most critical and utilitarian skills.

C. The transfer of instructional responsibility from the professor to the trainee. In general, students tire quickly of this practice when it is the primary mode of instruction. Trainee controlled instruction has a further limitation in that the input to a degree is controlled by the design of the module. It is also difficult to monitor the learning independently generated by the trainee as a result of participating in the module.

Point 3. Another concern relates to the utilization of practicum resources. Any sound training program must have direct access to severely and profoundly handicapped children. The state of the art in programming for severely and profoundly handicapped children suggests that at best available resources will be less than optimal for training purposes. Many of the resources will be in the form of public residential centers. As good as they may be, they have their limitations if you are preparing teachers for community settings. A case can be made for a return to the laboratory school concept. In recent years, universities have moved away from operating laboratory schools. However, because of the need for extensive pupil contact throughout the training program, I would argue in favor of university operated direct service programs as a training vehicle in this area when cooperative situations of high quality are not available and readily accessible. This argument can be strengthened due to the considerable research on teaching techniques applicable to the severely handicapped which is being generated, and I would not preclude cooperative programs with public schools - but they would have to be two-way.

Point 4. The recruitment of faculty members with appropriate skills represents a major concern. Our approach to staffing training programs in Special Education has been a circular approach, i.e., University A trains student hired by University B, etc. This process works assuming that the training is appropriate and production is sufficient. Our talent pool for the recruitment of teacher trainers for the severely and profoundly handicapped at the present time is exceedingly small and for the most part exists outside of regular recruitment channels. The most experienced candidates are also individuals who either come from disciplines other than education, such as psychology, or who are more experienced in research than teaching. They frequently also hold less than terminal degrees.

Point 5. Traditionally, universities have structured the delivery instruction around a model in which students are in a class 15 to 20 hours per week. The remainder of time is supposedly necessary for preparation. The influence of competency based instruction has caused some programs within universities to adopt a model which is less structured and which offers the student more freedom in determining the amount of time necessary to be devoted to participating in instructional activities. When I consider the kinds of teacher behaviors including skills and attitudes required to work effectively with the severely and profoundly handicapped, it appears to me that the best model would be one in which teacher trainees are involved full time, i.e., all day. The demands placed on a teacher of the severely handicapped are sufficiently different from those encountered by typical teachers that when coupled with their lack of active experience with severely handicapped children prior to entering the preparation program, it becomes essential that the training program must offer more than the training of teaching skills. In essence, the training program must also help teacher trainees become acclimated to the general conditions of working with the severely and profoundly handicapped. A full time model such as medical schools employ will require a change in attitude on the part of students. It will also require change on the part of Special Education faculty. As I listened to Haring's excellent presentation yesterday which not only applies a systematic procedure but which makes student curriculum basic to teacher training, I become more convinced that our tradition of how we involve teachers in training is working against us.

Point 6. The last concern is this perspective pertains to a topic which educators are often accused of being preoccupied with, i.e., certification. It doesn't bother me in the least that most states are slow in establishing requirements for certification to teach the severely and profoundly handicapped. In fact, I would prefer that we operate on a quasi-approval basis for a couple of years with no provision for permanency attached to the approval. Once certification standards are set, then training programs become restricted. While I strongly support licensing of teachers once certification requirements are set, they then become the yardstick against which training programs are evaluated. In some cases certification requirements are perceived as the goal of a training program. To me it is premature to set certification requirements to teach the severely and profoundly retarded. We are in a unique position (as uncomfortable as it may be) of not having a history in terms of training program design and certification requirements. To me this is an enviable position to be in if we want training programs to have an influence on the structuring of certification requirements.

These are the concerns which have influenced my perspective of training teachers of the severely and profoundly handicapped. To me the training must be different in form and intensity. Basically, I would suggest that the training process:

1. Allow for continuous contact with the target population and program elements surrounding the delivery of services to the severely and profoundly handicapped.
2. Be based on a training model approximately full time participation.
3. Focus on training individuals of high competence who are capable of program management plus teaching - and couple this with local staff development to prepare support personnel.
4. Draw on this positive feature of competency based instruction but that we do not take on all the features characteristic of most such programs.
5. That we push for flexibility in the selection of staff, i.e., the

involvement of individuals whose background and credentials may be atypical for teacher trainees.

6. That teacher training programs be tied to child centered curriculum development activities.

My intent this morning has been to share some concerns relative to developing teacher training programs for the severely and profoundly retarded and in doing so to remind those of you in positions of advocacy that although we can mandate public schools to action and can set requirements for teacher training programs, it would be a gross error to assume that because within the universities, there are departments which share your concern for the severely and profoundly mentally retarded - that your advocacy efforts need not focus on the university - they must.

Sound training programs will not emerge just because a department wants to respond. Unless an investment is made in creating resources commensurate with the demand for personnel, we may find the 24-hour retarded child being taught by teachers who run out of skills after an hour and a half.

PARENT TRAINING TECHNOLOGY:
A POTENTIAL SERVICE DELIVERY SYSTEM*

by

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During the past ten years, a number of papers have been published which demonstrate the effectiveness of parents as trainers or technicians in operant type behavior modification programs involving mentally retarded, psychotic, and brain damaged children, as well as other children with a variety of disruptive or deviant behaviors (Berkowitz & Graziano, 1972; Brown, 1972). Earlier studies, modeled after laboratory research, usually demonstrated the effectiveness of parents as behavior modification technicians using single behavior problems that required only rather simple contingency management techniques. Several studies were concerned with eliminating disruptive behavior in children, such as temper tantrums, using extinction or time out and conditioning incompatible appropriate behavior (Hawkins, Peterson, Schweid & Bijou, 1966; O'Leary, O'Leary & Becker, 1967; Shah, 1969; Wahler, Winkel, Peterson & Morrison, 1965; Williams, 1959). Others were concerned with developing one or two adaptive behavior skills in children, as well as eliminating disruptive behavior. Risley and Wolf (1967) demonstrated a mother could be used effectively to develop appropriate verbal behavior in a young child, and Wolf, Risley and Mees (1964) used psychiatric aides working with the parents of a psychotic child to train him to wear glasses consistently and eliminate his temper tantrums. Most of these studies employed rather simple parent training programs (Hawkins, Peterson, Schweid & Bijou, 1966; O'Leary, O'Leary & Becker, 1967; Risley & Wolf, 1967; Wahler, Winkel, Peterson & Morrison, 1965; Williams, 1959; Wolf, Risley & Mees, 1964).

As parent training research progressed, studies began to approximate "normal clinical models" more closely. Patterson provides an excellent example of this trend. Arguing that children who were seen in clinics usually have multiple behavior problems, he began dealing with several behavior problems in the same child simultaneously (Patterson & Brodsky, 1966). He developed procedures to aid the therapist in planning treatment strategies in child treatment programs involving parents, and he also developed a relatively complex program to teach parents to apply reinforcement contingencies to eliminate disruptive behavior and develop language and social skills in children (Patterson, McNeal, Hawkins & Phelps, 1967; Patterson, 1971). Parent training programs have continued to become more complex and formalized (Bernal, Williams, Miller & Reagor, 1972; Hall, Axelrod, Tyler, Grief, Jones & Robertson, 1972; Walder, Cohen, Breiter, Daston, Hirsch, & Leibowitz, 1969). In addition, studies evaluating different parameters of parent training programs have appeared, particularly those assessing the reliability of parents as observers or data collectors (Hall, Cristler, Cranston & Tucker, 1970; Herbert & Baer, 1972; Walter & Gilmore, 1973).

What can be concluded from these reports? It would seem that despite methodological weaknesses in individual studies (Berkowitz & Graziano, 1972), collectively, they provide impressive evidence that child behavior modification programs employing parents as behavior modification technicians have the potential to provide an economical, effective alternative to existing clinical intervention techniques.[1] However, before such intervention procedures become commonplace or a status quo part of the clinical armamentarium, they first must move beyond the phase of development described by Bricker (1970) as the "artistry" stage of behavior modification, particularly if they are to be used with clients who require more than contingency management technology to overcome their behavior disorders. The term "artistry" refers to the observation that most workers in the field of operant behavior modification have demonstrated that they can bring about certain changes, but relatively few have made their treatment procedures so explicit that others in the field can readily replicate what they did. The next step in the development of clinical behavior modification programs is to pursue the precedent established by workers in the programmed instructional materials field, and develop highly explicit training materials and procedures, and then standardize them on the targeted client or patient and therapist/educator populations for which they are intended so all relevant professionals can readily apply them at some criterion level of effectiveness. Then they will approximate a "Service Delivery System."

What should be the characteristics of a practical/useful clinical behavior modification service delivery system for the mentally retarded? If it is to have high utility value, it should be comprehensive enough to have application to a broad spectrum of the MR population - ideally severely, profoundly, moderately and mildly retarded individuals. Such breadth would increase its use in the typical mental health clinic or special educational system. Client or patient treatment programs should be numerous enough to deal with most behavior disorders exhibited by mentally retarded persons, and they should be both effective and replicable. In addition, other supportive programs that would ensure the effectiveness of the client treatment programs should be made available to the consumer, such as a staff training program and an evaluation program. They, too, should be effective and replicable. Finally, the system should be economical. If it costs no more or even less than existing clinical service delivery systems, its probability of acceptance by the clinical community will be increased further.

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[1] The major criticism made by Berkowitz and Graziano of the 34 parent training program papers reviewed was inadequate controls and measurements, limited follow-ups, poor evaluative techniques and lack of details of training methods and parent and child behavior changes.

The Parent Training Technology System (PTTS) comes close to approximating the criteria set forth in the previous paragraph. First, its application to the entire MR population is broad. It has been applied effectively with severely and profoundly retarded children as well as moderately and mildly retarded children. In addition, it has been effective with children diagnosed as primarily psychotic or "emotionally disturbed.". There are six sets of client treatment programs which deal with a broad range of behavioral disorders found in most mentally retarded persons. In addition, there are three supportive programs that increase the effectiveness of the client treatment programs. Finally, the program is quite economical. It cost $1,000 per child per year to operate during fiscal year 1973, which should make it economically available to almost all community mental health and special educational systems. (The amount covers staff and administrative salaries and expenses).

DESCRIPTION

The major tenet of the Parent Training Technology System is that a child's behavior is, to a great extent, determined by his social environment, particularly his mother. Other significant persons, controlling his day-to-day behavior are his father, his siblings, peers, and teachers. The major thrust of this program is to reorganize the child's social environment so that significant persons use reinforcement contingencies to develop and maintain behavior which approximates "normality" and do not reinforce, shape, or maintain behavior that characterizes the "behavioral essence" of the mentally retarded or psychotic child.[2] This strategy appears to be essential if children, once labeled psychotic and retarded, who are later habilitated to some extent, are to maintain their "normal" behavior and adapt to community life. Failure to carry out such a procedure can have drastic consequences, as evidenced by Lovaas (1973). For further discussion of this point of view, see Patterson (1971) and Patterson, McNeal, Hawkins and Phelps (1967).

By involving parents in home training programs for mentally retarded and psychotic children, two important stimulus control problems are solved. Both the parents and the home setting (physical setting) acquire appropriate stimulus control properties over the child's new desirable behavior developed during treatment. To carry the program a step further, if the child's siblings, peers and teachers also are included in the treatment program, then reorganization of the total relevant social environment should be virtually complete, and maintenance of the "normal" behavior acquired in treatment should be ensured. It is the novelty of the stimulus control properties of the community social environment and the community physical environment (as well as adverse reinforcement contingencies applied by members of the community social environment) that disrupts the effects of treatment programs carried out in residential institutions, day care centers and mental health centers, and results in behavioral "deterioration."[3]

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[2] The term normality, as used in this paper, refers to the observable, behavioral characteristics of a person in a particular community context. If a person "looks" and "acts" like others in his community, he is behaviorally normal, i.e., if he is not identified as "deviant" by other members of his community. This definition does not refer to internal "mental," intervening variable or neurochemical functions or processes.

The nine programs employed in the Parent Trainer Technology System constitute the total treatment system. They were designed to be interdependent and operate in a synchronized, integrated fashion. The six sets of Client Treatment Programs are programs for eliminating undesirable behavior (and generating cooperative or compliance behavior), programs for shaping self-help skills, for language skill development, for social-recreational skill development, for developing motor coordination, and programs for teaching academic skills. As previously mentioned, the three supportive programs are an administrative program designed to ensure effective operation of the system, a program to teach child behavior modification procedures to professional staff and parents, and an evaluation program to assess effectiveness of the system. All programs have been carefully developed in a step-by-step programmed instructional fashion, and have been tested with six professional staff, 40 mothers and approximately 54 children. The entire PTT System is summarized in Figure 1. As the latticed summary indicates, there are five subsystems that constitute the total PTT System. These are the Parent-Client Receiving Subsystem, the Parent PTT Training Subsystem, the Client Preacademic Training Subsystem, the Community School Synchronization Training Subsystem, and the Community School Placement Subsystem.

Patient-Client Receiving Subsystem. This subsystem consists of two phases:

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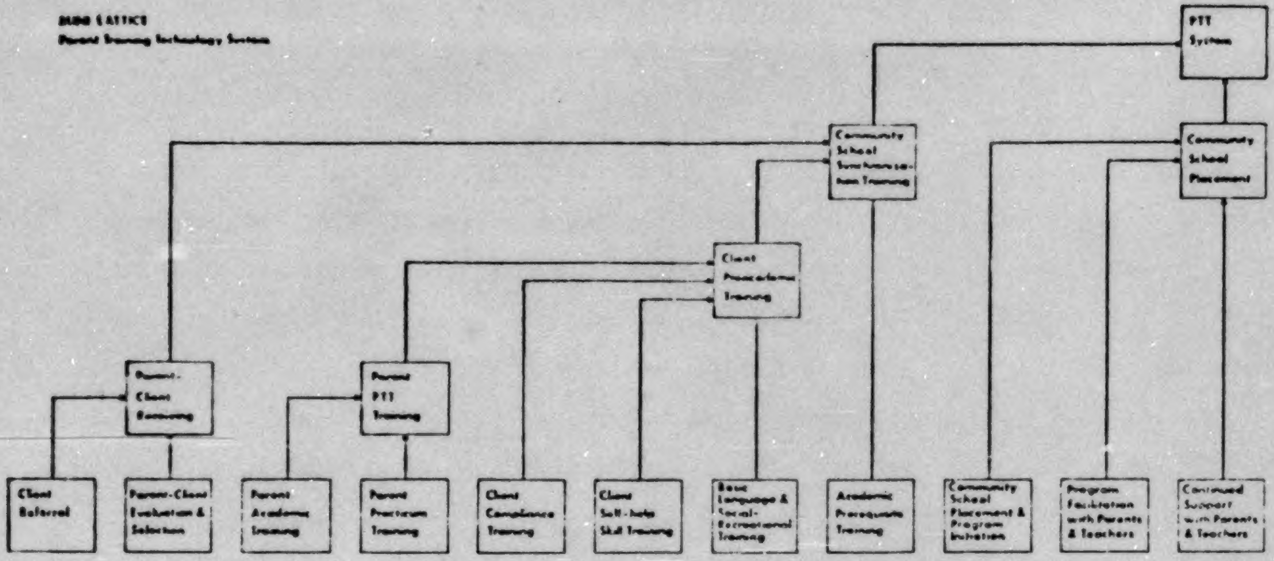
[3] Novelty in this case refers more accurately to undesirable incompatible stimulus control properties of the community social and physical environment. In the strict theoretical sense, both novel stimuli and stimuli associated with previously conditioned undesirable behavior account for the breakdown of "habilitation treatment effects" when mentally retarded and psychotic children are moved into a new environment.

FIGURE 1

LATTICED SUMMARY OF THE PARENT TRAINING TECHNOLOGY SYSTEM


MAIN LATTICE
Parent Training Technology System
PTT System
Community School Synchronization Training
Community School Placement
Client Preacademic Training
Parent-Client Recruiting
Parent PTT Training
Client Referral
Parent-Client Evaluation & Selection
Parent Academic Training
Parent Practicum Training
Client Compliance Training
Client Self-help Skill Training
Basic Language & Social-Recreational Training
Academic Prerequisite Training
Community School Placement & Program Initiation
Program Facilitation with Parents & Teachers
Continued Support with Parents & Teachers

A Client Referral Phase and a Parent Client Evaluation and Selection Phase. Two of the supportive programs involved in this subsystem are the Administrative Program and the Evaluation Program. The Administrative Program consists of an administrator (who also can be a home training specialist) and a number of Home Training Specialists. The project was geared to service 30 children during the last fiscal year, and clients were assigned to Home Training Specialists at the ratio of one for each 12 clients. However, these staff also had program development responsibilities and could easily have worked with a minimum of 15 parent/clients if they had operated only as clinicians. Each Home Training Specialist actually could carry more than 15 clients. If some of the weekly visits took place at the Home Training Specialist's office, e.g., every other week for clients who are making steady progress, each staff should be able to carry 20 to 24 clients. If such a program were operating in a city with a parent/client population concentrated in a small geographical area, the number of clients each Home Training Specialist could carry would be even greater. However, the $1,000 per client annual cost figure is based on each Home Training Specialist carrying only 15 clients. Before actually accepting clients, all newly hired Home Training Specialists were required to go through a modified version of the to-be-described Parent Training Program and complete an internship of approximately four months.

The Client-Referral Program operated in a manner similar to other clinics or schools. Children were referred from diagnostic centers in hospitals, by local pediatricians and neurologists, and by special educational services in the community. Parents also call in directly after having heard about the program. The program was instituted by sending out announcements to all of these facilities and physicians and frequently through follow-up with personal "get acquainted meetings." Finally, whenever it was appropriate, the administrators went to a particular facility and talked to staff about the program; they continued to maintain a constant PR relationship with relevant medical and educational persons throughout the community. These activities provided the program with more than enough clients.

Parent-Client evaluation and selection were carried out in the following manner. On the day that the parents' names were received the program administrator contacted the parents by telephone. The telephone interview was designed to identify the type of service the parents were actually seeking, acquaint the parents with the program, and determine the characteristics of the child to see if he qualified for the service. If the parents expressed interest, and the child was within the population served, that family was assigned to a Home Training Specialist who telephoned the parents and set up a home visit.

The initial home visit was designed to determine whether the parents would fit into the program and to begin a global behavioral evaluation of the child. The program was described to both parents in detail, and their obligations to the program were carefully covered. Their obligations were: (a) to go through the Parent PTT Training Program, (b) to train the child daily, (c) to keep prescribed data or records, (d) to be present for weekly home visits with the Home Training Specialist, and (e) to carry out the treatment procedures as worked out between the parents and the Home Training Specialist. (These obligations essentially constituted the parent admission criteria.) If they agreed to these contingencies, and the child was appropriate for the program, a Contingency Contract was produced, and they were asked to sign it (a copy of the Contingency Contract can be found in Watson, 1972a). The major criteria for accepting children was that they were 10 years of age or younger, had multiple-severe behavior problems and were diagnosed mentally retarded and/or psychotic. Final acceptance of any family into the system was made by a committee consisting of the project administrator and all Home Training Specialists. Approximately 70% of the families referred were accepted into the program.

The second function performed during the initial home visit was to evaluate the child globally, see how he might fit into existing community educational systems, and to plan a treatment program with the parents (both the parents and the Home Training Specialist planned the program together). A series of checklist type evaluation instruments, designed specifically for the system, were used in this initial global evaluation. The six major areas assessed were undesirable behavior/cooperation, self-help, language, motor coordination, social-recreation and academic skills (one of the instruments, the Self-help Skills Assessment Checklist can be found in Watson, 1972a). The checklists were designed to be compatible with the Client Treatment Programs covered in Watson (1972a). The items in the scales were written in a "stepwise successive-approximation hierarchical order" and produced a profile which specified where training should begin in each Client Treatment Program (the Client Treatment Programs will be considered in the next section). Often, two sessions of approximately two hours each were required to complete the global evaluation of the client. Results of this evaluation constituted the basis for planning the total training program for the child.

Parent PTT Training Subsystem. Parents were then taught, either in the office or the home, principles of behavior modification and their applications. Since training of parents took place primarily in the daytime, fathers were not always present, but they were asked to read the textbook and see at least one movie (it became obvious early in the program that fathers usually played a relatively minor role in day-to-day training of the child). Parent training consisted of an academic phase and a practicum phase. The actual content of the academic and practicum phases taught was based on the findings of the global evaluation.

1. Academic Training. Materials used in academic training were a programmed text, a series of examinations, and ten sets of 35 mm. slides. The programmed text consisting of ten chapters, (Watson, 1973) was developed and pretested with 765 parents, teachers, RN's and nurses aides. It was ideally suited for parents, (Watson, Lovaas, Gottwald & Dayan, 1971), and written in a language very familiar to them (as opposed to psychological, technical jargonese). All examples were drawn from the everyday life experiences of parents and teachers. Terms, such as reinforcement, were defined simply as "something a child likes and is willing to work to get." Topics covered in the text were reinforcement, shaping, stimulus control, their applications and data collection. True-false, fill-in and essay examination items were placed throughout the book following each topic, to allow the reader to assess her comprehension of the material (and insure that the reader would identify all important points made in the book). The exam items were identical to the ones in the book. A true-false, fill-in essay progression was designed to "shape" the reader's verbal behavior, i.e., first she merely identified the correct answer (T-F), then she produced the key words to complete an answer (fill-in), and finally, she had to generate the answer completely (essay). The 35 mm. slides were used as visual aids during ten companion lectures that were given during academic training.

The Academic Program operated on a contingent basis using a reading assignment lecture-discussion sequence. When the program was first instituted and there were a number of parents to be trained at once, academic training took place in a classroom. However, after the program was established, and new parents/clients were accepted at the rate of one or two a month, academic training was carried out in the parent/client's home. If the parent was being trained at home, academic training began by the Home Training Specialist giving the parents the text and explaining its design (a programmed text), the necessity of doing the test items as they were encountered in the book, and the general progression of the parent training program, i.e., one chapter in the text would be covered each day, and there would be a lecture and discussion each day, with progress from the reading assignment to the lecture to the discussion being contingent upon satisfactory performance on the tests. Then the parent was told to read chapter one for the next day, and the Home Training Specialist left. The next day, when she arrived at the home, the Home Training Specialist gave the parent a true-false and fill-in examination to determine whether the first reading assignment was satisfactorily understood. A 90% correct raw score was the required grade in order for the parent to qualify for the lecture (the program was designed to produce excellence in student academic performance). If the parent did not meet criterion, the Home Training Specialist either allowed her to review the relevant sections in the book or went over the test items with her. The parents then took the missed test items (failure to meet criterion was the exception rather than the rule). When the test criterion was met, the Home Training Specialist began the lecture. There was a set of 35 mm. slides for each of the 10 chapters in the text. Each slide accompanied lecture was designed to illustrate and supplement the material covered in the text. After completing the lecture, the parent took an essay examination to assess her comprehension of the lecture. Again, a 90% score was required for a passing grade. If the criterion was not met, the same remedial procedure used with the textbook assignment was repeated. Then the discussion was carried out. During the discussion, any confusing concepts were dealt with, and the parent was required to provide examples of the various principles or their applications using her own life experiences. At the conclusion of the discussion, the parent was given the next reading assignment: (chapter two), and the Home Training Specialist left. This sequence was repeated until all ten chapters in the text were completed. A total of 20 hours was required to complete academic training in this fashion. If the child was primarily a behavior management problem, an abbreviated version of this course was taught.

2. Practicum Training. At the conclusion of Academic Training, the parent was given a new text which contained a series of self-help, language and social recreational programs and programs for eliminating undesirable behavior and developing cooperation (Watson, 1972a). These programs were written in a step-by-step fashion and included all the information necessary for a parent, who had been through the inservice training program, to carry out training in these three areas. If the child was deficient in self-help skills, the parent was instructed to read the chapter on self-help skill training before the next home visit, and the Home Training Specialist left. (The actual progression of practicum training depended upon the child's behavioral repertoire).

During the next home visit, a self-help skill movie was shown to the parent (if self-help skill development was a major goal of the program, the father was requested to attend the movie). This movie, entitled, "Teaching Self-help Skills to Children with Behavioral Disorders," (Watson, 1972b), demonstrated how a parent should determine a child's reinforcement preferences, develop eye contact, and shape compliance behavior. It then progressed to the steps involved in carrying out self-help skill training. Applications of reinforcement, shaping and stimulus control principles were covered as well. After the movie, the parent was asked to demonstrate her understanding of the movie by modelling what she saw, and attempting to teach a simple self-help skill (if she could make sufficient progress with her child). As she worked with the child, her performance was evaluated by the Home Training specialist using an instrument called the Training Proficiency Scale. The Training Proficiency Scale (TPS) is a 40-item 5-point rating scale-type checklist, designed to assess a person's behavior modification skills. The items on the checklist cover all dimensions of behavior modification (a copy of the checklist and scoring instructions can be found in Watson, 1972a). The criterion for passing the self-help practicum exam, using the TPS, was 95%. Nobody passed the test the first time. After evaluating the parent using the TPS, the Home Training Specialist went over low scored items with her, and the procedure was repeated. The TPS procedure continued until the parent met criterion. Then she was assigned the chapter on language in the book of programs, and the Home Training Specialist left.

At the next home visit, the parent was shown a movie entitled, "Teaching Language to Children with Behavioral Disorders,"(Watson, 1972c). The movie demonstrated how the language program was taught to children. Again, the parent was asked to model the movie with her child, and the TPS procedure was repeated. When she met criterion on the language examination, the social-recreational skill chapter was assigned in the book of programs, and during the next home visit, a movie entitled, "Teaching Social-Recreational Skills to Children with Behavioral Disorders," (Watson, 1972c) was shown; then the TPS practicum procedure was repeated. The entire practicum procedure required approximately 10 hours.

Client Pre-academic Training and School Synchronization Training. Client treatment programs were initiated as soon as the parent demonstrated her ability to carry them out, i.e., met criterion using the TPS checklist. They were usually initiated in the following order. The parent began by determining the child's reinforcement preferences, shaping eye contact and developing compliance or cooperation behavior (which includes elimination of undesirable behavior). Then self-help skill training was initiated. This included such programs as toilet training, eating with utensils, undressing, dressing, bathing and toothbrushing. Once these kinds of programs were established, language training usually was undertaken followed by social-recreational skill training. The language program contained receptive vocabulary and concept development components plus sound production and word production components, as well as sentence construction components. The social-recreational skill program consisted of a series of games the child was taught to play. It also included a "social-affect" component and incorporated siblings and peers into the training sessions.

The final program to initiate was academic prerequisite training, which consisted of shaping the skills needed to qualify a child for acceptance into a special-educational class in the community, such as developing cooperation further and sitting at a table for an extended period of time and carrying out a task to completion without disrupting the work of other children in the class. By the time a mother had all programs going, she would be spending two to three hours a day in intensive training. In addition, she maintained newly acquired behavioral skills, 24 hours a day. A sample of a typical daily training schedule for a mother can be found in Table 1. After the training program was established (six to eight weeks), the Home Training Specialist usually made only one visit to the home each week.

TABLE 1

TRAINING PROGRAM CARRIED OUT BY A PARENT WITH HER PSYCHOTIC/RETARDED CHILD

I -ELIMINATION OF UNDESIRABLE BEHAVIOR

1. Temper tantrums
2. Smearing
3. Ruminating
4. Spitting
5. Inappropriate items in mouth
6. Running away from home
7. Inappropriate noises
8. Playing in water
9. Self-abusive behavior (e.g., biting hand, pulling hair, and head banging)

II -SELF-HELP

1. Toilet training
2. Dressing skills-including zip, buckle, and snap
3. Bathing
4. Brushing
5. Combing hair
6. Clothes preference

III-LANGUAGE & SPEECH

1. Attending-e.g., eye contact
2. Physical imitation (gross and fine body-gross and fine facial)
3. Auditory memory span
4. Auditory discrimination
5. Object discrimination-concept discrimination
6. Sound imitation
7. Echoic vocabulary building
8. Non-echoic vocabulary building
9. Verbal contingencies
10. Spontaneous generalization

IV -EDUCATIONAL

1. Puzzles
2. Parquetry designs
3. Lotto
4. Frostig (Books 1, 2, and 3)
5. Color discrimination and recognition
6. Numbers-recognition (1-20), concepts (1-15), and printing (1-20)
7. A-B-C's recognition and printing
8. Reading readiness (work book and memos)
9. Recognition of printed labels (initially used as a teaching technique to develop receptive vocabulary)
10. Coloring, cutting and pasting
11. Token economy system (use of pennies)
12. Full day school program

V -SOCIAL-RECREATIONAL

1. Simple games (with classmates and and sibs) e.g., London Bridge, relay races, ball, Ring-A-Round the Rosie, musical chairs,etc.
2. Concept of "share"
3. Simple household chores-e.g., take out trash, pick up clothes and toys, set table, make bed

Community School Placement. The final stage of the PTT system was to place the child in an appropriate community academic setting. This required careful synchronization between the PTT System agency and local community special education systems. One means of coordination was for the Home Training Specialist to consult with the teacher who was scheduled to receive the child prior to his placement, agree upon the prerequisite skills needed for him to be accepted into the classroom, and then continue to consult with the teacher about behavior management and academic programming after the child was admitted to the class. In addition, weekly home visits with the parent continued after the child was admitted to a community school program. One of the functions performed by the Home Training Specialist after the child was in a school was to coordinate parent training activities with classroom student programming.

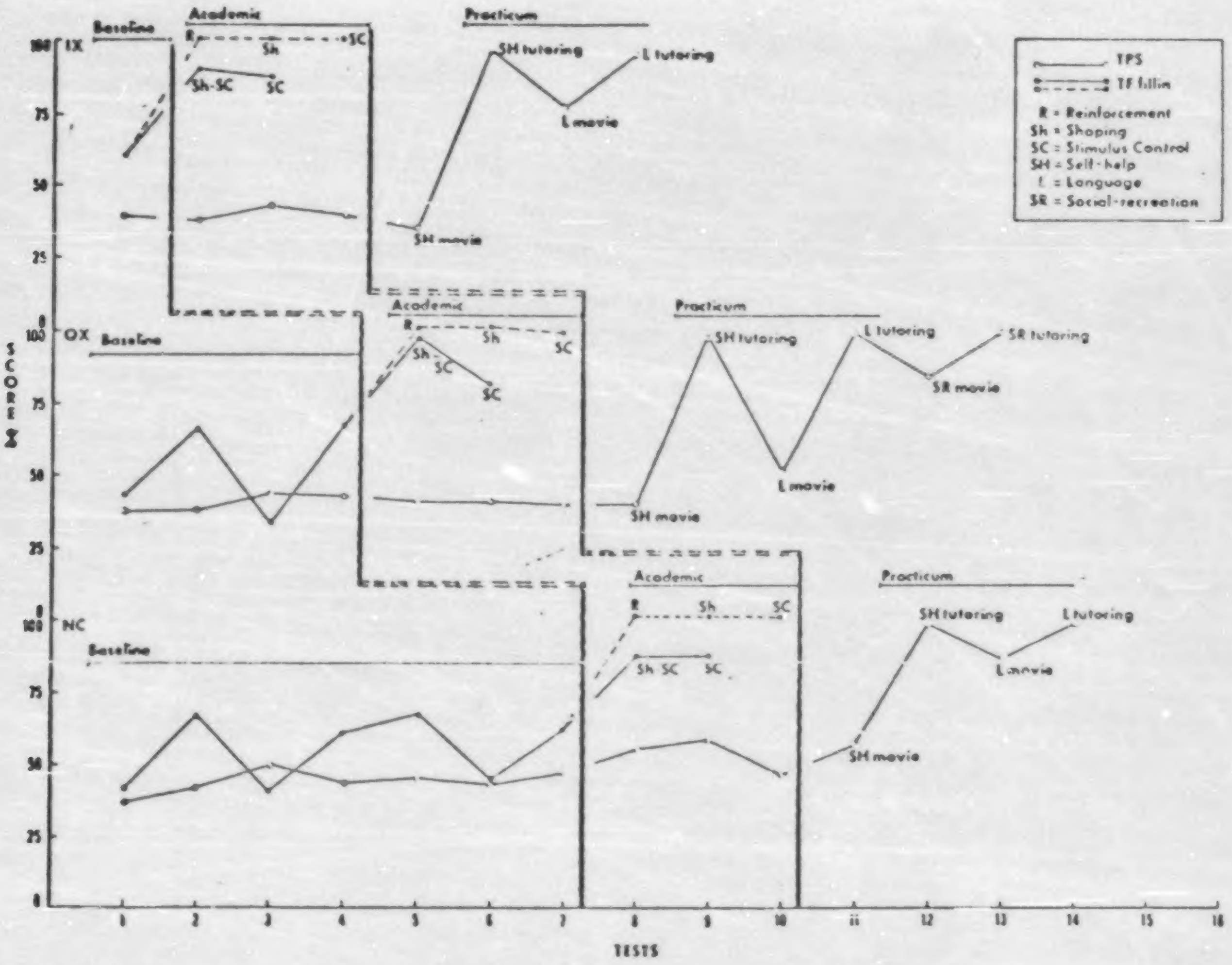
EVALUATION

Two types of evaluations on the PTT System were carried out. Since all parents kept daily data, quantitative daily records of clients are available over the three years this program operated (the types of data kept by parents are described in chapter 10 of Watson, 1973). These kinds of records were used in annual progress reports (Watson & Bassinger, 1971, 1972). In addition, several multiple-base line evaluations (Baer, Wolf & Risley, 1968) of the Parent Training Program and certain Client Treatment Programs were made.

The results of a multiple-base line study of the Parent Training Program are summarized in Figure 2. This study was designed to assess the relative effectiveness of academic and practicum phases of the program. Three parents were used in the study, and all were high school graduates. Three topics in the academic training were assessed: reinforcement, shaping and stimulus control. Three phases of practicum training also were evaluated: self-help skill training, language training, and social-recreational skill training. In addition, the effects of showing movies were compared with actual tutored-TPS feedback training. True-false, fill-in test scores were used to assess academic performance and TPS scores were used to evaluate practicum performance. Average interobserver agreement for the T-F, fill-in tests was .997 (.967-1.00) and for the TPS was .938 (.824-1.00). The main findings were that academic training influenced academic performance but had little influence on practicum performance. Practicum training was the primary factor influencing practicum performance, and seeing a movie of someone else training was not as effective as tutored-TPS feedback for developing criterion level performance. However, it is not clear to what extent seeing the movie first influenced tutored-TPS performance.

FIGURE 2

RELATIVE PERFORMANCE OF THREE PARENTS IN THE ACADEMIC AND PRACTICUM PHASES OF THE PARENT TRAINING PROGRAM. THE SOLID LINES IN T-F FILL-IN INDICATE TESTS ON ACADEMIC PHASES THAT WERE NOT TAUGHT AT THAT TIME, AND THE BROKEN LINES INDICATE TESTS ON ACADEMIC PHASES THAT WERE TAUGHT DURING THAT SESSION. ALL PARENTS WERE REQUIRED TO MEET A 90% CORRECT CRITERION BEFORE MOVING FROM ONE PHASE OF THE ACADEMIC PROGRAM TO THE NEXT, AND A 95% CRITERION WAS REQUIRED FOR MOVING FROM ONE PHASE OF THE PRACTICUM PROGRAM TO THE NEXT.



Figures 3, 4, 5 and 6 summarize mini studies designed to assess parent training effectiveness. Figure 3 is a summary of an undressing component of the Self-Help Skill Program while Figures 4 to 6 are concerned with receptive vocabulary, sound production and word production components of the Language Program, respectively. Two parents were involved in these experiments (they also participated in the Parent Training Program multiple-base line study). The child involved in the undressing and receptive vocabulary experiments was a 6-year-old, female, blind, nonambulatory hydrocephalic with an SQ of 14. As Figures 3 and 4 indicate, her mother effectively taught her to take off her underpants and undershirt and learn the names of two

FIGURE 3

INFLUENCE OF UNDRESSING PANTS AND SHIRT TRAINING ON UNDRESSING PANTS AND SHIRT PERFORMANCE. DRESSING PANTS AND SHIRT TRAINING SERVED AS THE CONTROL CONDITION

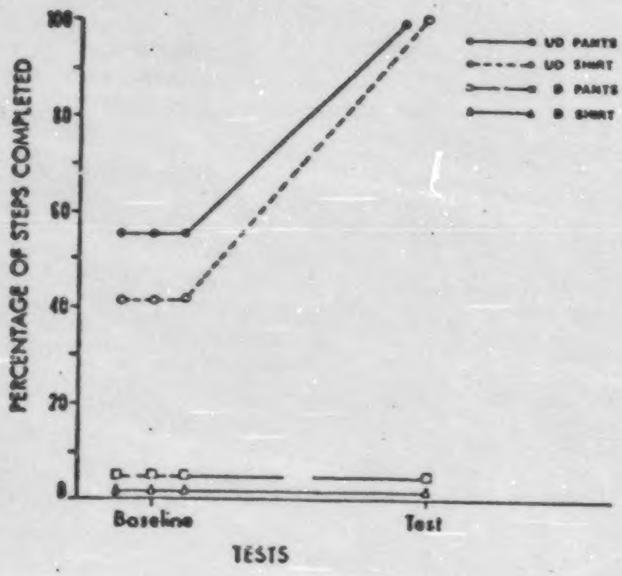


FIGURE 4

INFLUENCE OF RECEPTIVE VOCABULARY TRAINING ON A CHILD'S OBJECT IDENTIFICATION PERFORMANCE. SPOON AND GLASS SERVED AS THE TWO EXPERIMENTAL OBJECTS WHILE HAT, SHOE, SOCK AND BOWL WERE USED AS THE CONTROL OBJECTS

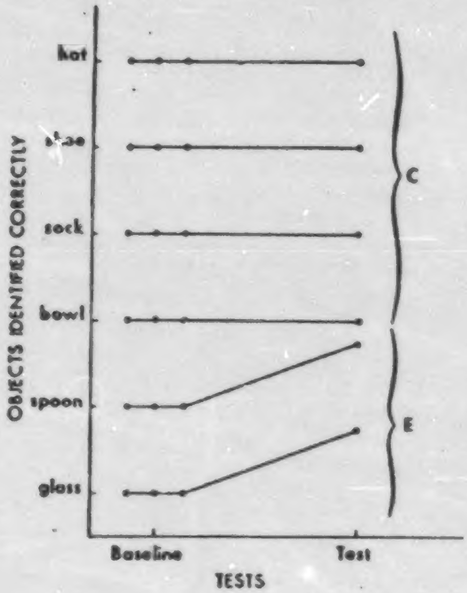


FIGURE 5

INFLUENCE OF SOUND ARTICULATION TRAINING ON SOUND ARTICULATION PERFORMANCE. THE CHILD WAS FIRST TRAINED ON THE THREE LOWER SOUNDS WHILE ALL THE OTHER SOUNDS WERE USED AS CONTROLS (SEE T_1). AFTER MEETING CRITERION, SHE WAS THEN TRAINED ON THE NEXT FOUR SOUNDS AND THE REMAINING SIX SOUNDS WERE USED AS CONTROLS (SEE T_2)

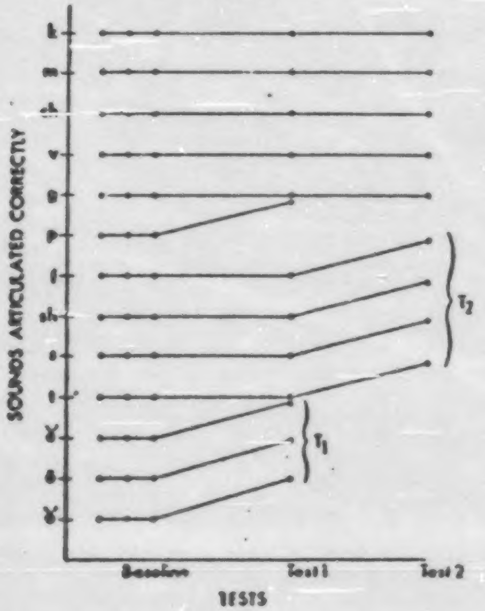
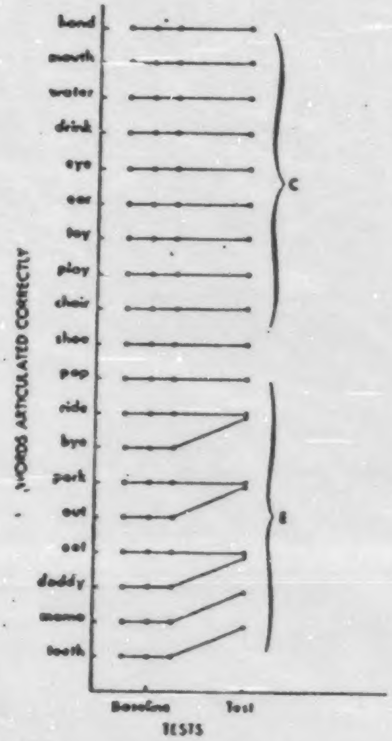


FIGURE 6

INFLUENCE OF WORD PRODUCTION ARTICULATION TRAINING ON WORD PRODUCTION ARTICULATION. THE CHILD RECEIVED TRAINING ON THE LOWER NINE SOUNDS (SEE E FOR EXPERIMENTAL) AND THE UPPER SOUNDS SERVED AS CONTROLS (SEE C)



common, personal objects. Qualitative Data Sheets were used to record this data (see Watson, 1973, Chapter 10), and interobserver agreements for both experiments were 100%.

The second child, involved in the two speech production components of the Language Program (sound production and word production), was a 3-year-old, nonverbal, retarded girl with an SQ of 62. At the outset of the program, she had no criterion level articulated words in her expressive vocabulary. As Figures 5 and 6 show, her mother taught her seven sounds and five words. Average interobserver agreement for the Qualitative Data Sheets in these two language studies was .905 (.813-1.00). All programs assessed in Figures 3 to 6 were from, "How to Use Behavior Modification with Mentally Retarded and Autistic Children: Programs for Administrators, Parents, Teachers and Nurses," (Watson, 1972a).

Follow-up evaluations were made of parents after they completed training. During the last 3 months of the project all professional staff and parents were videotaped. Then three staff sat down and evaluated the performance of everyone videotaped using the TPS. Professional staff averaged 95% TPS scores while parents averaged 90%. Thus parents performed at a high level of trainer proficiency and compared favorably with professional staff in the project. In conclusion, their training performance did not deteriorate as a function of time in the program.

CONCLUSION

These preliminary findings suggest that the Parent Training Technology System has promise as a potential service delivery system. The qualifier, potential is used because additional field tests of the entire system are still underway with new professional staff, new parents and children in a different geographical setting (from the first project). Certainly the system has certain important advantages. It is economical: it cost $1,000 per child per year during the last year of operation, so any community educational or clinical system should be able to afford it. In addition, very limited office space is required for carrying out the program (a second economy factor). It has a simple administrative structure. Only a part-time administrator is required. Home Training Specialists, assigned at a ratio of one to every 15 clients, also serve other administrative functions. Thus, complicated, interfering bureaucratic problems are eliminated. Since parents are used as staff, problems relating to locating and recruiting training staff to carry out the programs are avoided And since all client training takes place in the home and in the school using parents, teachers, peers and siblings as trainers, many important stimulus control problems inherent in other clinical intervention methods are avoided. Thus, it appears to be a practical, useful habilitation system with broad applications to the mentally retarded.

REFERENCES

Baer, D. M., Wolf, M. M. & Risley, T. R. Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1968, 1, 91-97.

Bernal, M. E., Williams, D. E., Miller, W. H. & Reagor, P. A. The use of videotape feedback and operant learning principles in training parents in management of deviant children. In R. D. Rubin, H. Fensterheim, J. D. Henderson, and L. P. Ullman (Eds.), *Advances in behavior therapy*. New York: Academic Press, 1972.

Bricker, W. A. Identifying and modifying behavioral deficits. *American Journal of Mental Deficiency*, 1970, *75*(1), 16-21.

Brown, D. G. *Behavior modification in child, school, and family. Mental health: An annotated bibliography*. Champaign, Illinois: Research Press, 1972.

Hall, R. V., Axelrod, S., Tyler, L., Grief, E., Jones, F. C. & Robertson, R. Modification of behavior problems in the home with a parent observer and experimenter. *Journal of Applied Behavior Analysis*, 1972, *5*, 53-64.

Hall, R. V., Cristler, C., Cranston, S. S. & Tucker, B. Teachers and parents as researchers using multiple baseline designs. *Journal of Applied Behavior Analysis*, 1970, *3*, 247-255.

Hawkins, R. P., Peterson, R. F., Schweid, E., & Bijou, S. W. Behavior-therapy in the home: Amelioration of problem parent-child relations with the parent in a therapeutic role. *Journal of Experimental Child Psychology*, 1966, *4*, 99-107.

Herbert, E. W. & Baer, D. M. Training parents as behavior modifiers: Self-recording of contingent attention. *Journal of Applied Behavior Analysis*, 1972, *5* 139-149.

Lovaas, O. I., Koegel, R., Simmons, J. Q., Stevens, J. Some generalization and follow-up measures on autistic children in behavior therapy. *Journal of Applied Behavior Analysis*, 1973.

O'Leary, K. D., O'Leary, S. & Becker, W. C. Modification of a deviant sibling interaction pattern in the home. *Behavior Research and Therapy*, 1967, *5*, 113-120.

Patterson, G. R. Behavioral intervention procedures in the classroom and in the home. In A. E. Bergink and S. L. Garfield (Eds.), *Handbook of pschotherapy and behavior change: An empirical analysis*. New York: John Wiley & Sons, 1971.

Patterson, G. R. & Brodsky, G. A behavior modification programme for a child with multiple problem behaviors. *Journal of Child Psychology and Psychiatry*, 1966, *7*, 277-295.

Risley, T. R. & Wolf, M. M. Experimental manipulation of autistic behaviors and generalization into the home. In S. W. Bijou and D. M. Baer (Eds.), *Child development: Readings in experimental analysis*, New York: Appleton-Century-Crofts, 1967.

Shah, S. A. Training and utilizing a mother as the therapist for her child. In B. G. Guerney (Ed.). *Psychotherapeutic agents: New roles for nonprofessionals, parents, and teachers.* New York: Holt, Rinehart and Winston, 1969.

Wahler, R. G., Winkel, G. H., Peterson, R. F. & Morrison, D. C. Mothers as behavior therapists for their own children. *Behavior Research and Therapy*, 1965, *3*, 113-134.

Walder, L. O., Cohen, S. I., Breiter, D. D., Daston, P. G., Hirsch, I. S., & Leibowitz, J. M. Teaching behavioral principles to parents of disturbed children. In B. G. Guerney (Ed.), *Psychotherapeutic agents: New roles for nonprofessionals, parents and teachers*. New York: Holt, Rinehart and Winston, 1969.

Walter, H. I. & Gilmore, S. K. Placebo versus social learning effects in parent training procedures designed to alter the behavior of aggressive boys. Behavior Therapy, 1973, 4, 361-377.

Watson, L. S. Child behavior modification: A manual for teachers, nurses and parents. New York: Pergamon Press, 1973.

Watson, L. S. How to use behavior modification with mentally retarded and autistic children: Programs for administrators, teachers, parents and nurses. Columbus, Ohio: Behavior Modification Technology, Inc., 1972a.

Watson, L. S. Teaching self-help skills to children with behavioral disorders, (Videotape or 16 mm. film). Columbus, Ohio: Behavior Modification Technology, Inc., 1972b.

Watson, L. S. Teaching self-help skills to children with behavioral disorders, (Videotape or 16 mm. film). Columbus, Ohio: Behavior Modification Technology, 1972c.

Watson, L. S. Teaching social-recreational skills to children with behavioral disorders, (Videotape or 16 mm. film). Columbus, Ohio: Behavior Modification Technology, 1972d.

Watson, L. S. & Bassinger, J. F. Community mental retardation facilities staffing grant progress report. Behavior modification community training program, Grant No. 1-HO1-MR-08181-01. Washington, D.C.: U. S. Department of Health, Education and Welfare, 1971.

Watson, L. S. & Bassinger, J. F. Developmental disabilities act grant progress report. Community behavior modification project for children, Grant No. 1971-6. Washington, D. C.: Developmental Disabilities Act, 1972.

Watson, L. S., Lovaas, O. I., Gottwald, P., & Dayan, M. Behavior modification of mentally retarded and autistic children using the operant conditioning method. In D. A. A. Primrose (Ed.), Proceeding of the second congress of the international association for the scientific study of mental deficiency. Warsaw: Polish Medical Publishers, 1971.

Williams, C. D. The elimination of tantrum behavior by extinction procedures. Journal of Abnormal and Social Psychology, 1959, 59, 269.

Wolf, M. M., Risley, T. & Mees, H. Application of operant conditioning procedures to the behavior problems of an autistic child. Behavior Research and Therapy, 1964, 1, 305-312.

COMPONENTS OF INSTRUCTIONAL PROGRAMS FOR SEVERELY HANDICAPPED STUDENTS*

by

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Severely handicapped students (Sontag, Burke, & York, 1973) are often different from many "normal" and "mildly handicapped" students on a variety of relevant instructional dimensions (e.g., generalization, retention, imitation, articulation, acquisition, vision skills). Due to such differences the premise offered is that the teacher of these students must systematically delineate, compensate for the absence of, or directly teach skills that teachers of less handicapped students may assume are operative.

For the past several years the writers and their colleagues have been attempting to formulate and implement developmentally tenable and empirically verifiable educational services for severely handicapped students in the Madison, Wisconsin, Public School System. One of the vehicles determined of substantial educational value from both training and service perspectives is the organization of circumscribed teacher-pupil interactions into instructional programs. The term instructional program, as it is used here, refers to basic factors, variables, etc., that a teacher of severely handicapped students must consider, systematize, and/or implement in order to teach a particular skill.

Brown and York (1974) delineated a four component model of an instructional program: What to teach (content); how to teach (method); how does one assess whether or not one has taught (measurement); and the instructional materials required.

Using the four component model of an instructional program delineated above, severely handicapped students have been taught many developmentally important, practically useful, yet circumscribed skills (Brown, Bellamy & Sontag, 1971; Brown & Sontag, 1972; Brown, Scheuerman, Cartwright & York, 1973; Brown, Williams & Crowner, 1974). However, as should be obvious, adherence to the four component model may be necessary, but is not sufficient to provide the best possible instructional services in that several crucial factors related to the acquisition and performance of specific skills are not taken into account. Thus, the four component instructional program has been expanded substantially and is presented below:

Basic Components of an Instructional Program

I. What skill does a teacher intend for the student to perform (What does a teacher intend to teach the student)?

II. Why does a teacher want the student to perform a specific skill?

III. How does a teacher intend to teach the student to perform a skill?

IV. How can a teacher empirically verify that the skill of concern is being or has been taught?

V. Can the student perform the skill at a situationally acceptable rate?

VI. What does a teacher intend to use as vehicles (instructional materials) for the skill to be acquired and performed?

VII. Can the student perform the skill across:

   a. Persons;
   b. Places;
   c. Instructional materials;
   d. Language cues?

VIII. Can the student perform a skill without directions to do so from persons in authority?

Before proceeding to a more detailed presentation of each component, several points should be noted and emphasized. First, space does not permit as detailed a presentation of each component as is possible. Second, there is no doubt that the list of components delineated above is incomplete and that additional components will evolve. Third, we are recommending that a teacher of severely handicapped students empirically verify the acceptable status of his/her students on dimensions of at least the components delineated above.

In the narrative that follows, an attempt will be made to elucidate the basic qualities of each component, justify their inclusion, show how they might be realized, and provide teachers with practical suggestions as to how the requisite skills inherent in each might be incorporated into instructional activities.

1. What skill does a teacher intend for the student to perform?

One of the more crucial differences between teaching normal or mildly handicapped students and severely handicapped students is the degree of precision required when presenting instructional content (Brown & York, 1974). Teachers of severely handicapped students must be afforded the experiences and skills necessary to systematically dissect, sequence, re-dissect, re-sequence, etc., skills under instruction. In our judgment, the conceptual and problem attack skills required and fostered by a task analysis orientation are ideally suited for teachers of severely handicapped students.

A teacher may be interested in teaching a value, an appreciation, an attitude, a skill, a concept, an understanding, a subtlety, or a feeling. Certainly, such initially nebulous objectives can be taught to severely handicapped students.

However, the position offered here is that such objectives probably can be realized more efficiently if they can be operationalized in such a manner as to clearly indicate to the teacher and to the student precisely what is requested and when it should be manifested. It is a rare severely handicapped student indeed who can make large leaps through poorly organized and unspecific curriculum content. On the other hand it has been our experience that all students can acquire new skills if those skills are dissected and sequenced precisely.

Task analysis essentially requires the precise delineation of skills within a particular curriculum area, the division of those skills into component parts, and the sequencing of those skills from easy to hard (simple to complex). According to Resnick, Wang and Kaplan (1974) task analysis involves:

> the develop(ment of) hierarchies of learning objectives such that mastery of objectives lower in the hierarchy (simpler tasks) facilitates learning of higher objectives (more complex tasks) ... This involves a process of task analysis in which specific behavioral components are identified and prerequisites for each of these determined (p. 680).

Perhaps the major purpose of analyzing skills inherent in a curriculum content area is to delineate an organized and precisely stated constellation of verifiable objectives from which a variety of instructional activities can be generated. A task analysis is not a statement of how a skill is to be taught but rather a statement of what is to be taught. A precise delineation of what is to be taught is an obvious prerequisite to the determination of the required materials, teaching procedures, measurement procedures, etc.

Notions as to what skills should be included in a particular content area and how such skills might be analyzed and sequenced can be obtained or abstracted from at least the following:

a. general child development literature,

b. general cognitive development literature,

c. general special education literature,

d. commercially available curriculum packages,

e. logical post-school performance demands.

It has been our experience that teachers of severely handicapped students can rarely use, without substantial adaptation, commercially available instructional content. Thus, from a training perspective, perhaps it is more appropriate to provide a teacher with skills and experiences in the area of task analysis so that in subsequent practical situations that teacher can adapt other or create new analyses to fit the developmental functioning level of his/her students.

There are at least three major reasons why teachers of severely handicapped students should be skilled in the use of basic principles of task analysis. First, a task analysis delineates starting points and terminal objectives and enhances the possibility that essential component skills will not be neglected. Second, utilization of task analysis procedures facilitates instruction that is tailored to individual functioning levels. For example, within the task analysis model mastery of various objectives can be assessed before instruction and students may only be instructed on objectives on which they failed to reach and for which they have mastered the prerequisites. In addition, students can be permitted to proceed through the sequence at their own pace, taking longer on trouble spots and skipping objectives on which they demonstrate mastery. Third, the utilization of task analysis procedures facilitates the development of more effective and efficient classroom programming. That is, a teacher can obtain data from students concerning the order in which skills are most readily acquired and skills that must be broken into smaller subskills in order to facilitate acquisition. This information can be used to continually improve instructional programs.

II. Why does a teacher want the student to perform a specific skill?

Generally, longitudinal educational objectives for severely handicapped students should be no different than those for other students. Public schools should prepare severely handicapped students to function as independently as possible socially, vocationally, and personally in the least restricting post school environment. In our view, there is no justification for preparing students to function in large residential institutions or to foster or maintain the development of environments that unduly shelter, restrict, or retard.

Perhaps due to the limited educational opportunities in the past and the almost inevitable placement of severely handicapped citizens in large residential institutions, it might have been acceptable to teach them to "walk in line," "make pot holders," "watch Jack LaLane" without much concern for why such skills were taught. Now, however, severely handicapped students will be enrolled in public school programs for as long as 21 years. Longitudinal public education coupled with the goals of the deinstitutionalization and child advocacy movements force us to ask and justify why we should teach any specific skill. It is our current view that instruction of a skill should be justified primarily as a cumulative segment of a developmentally sound longitudinal curriculum sequence which is designed to insure independent functioning.

Well defined skill sequences across curricula domains (e.g., math, reading, language, play, self-help, independent community functioning) may be utilized to precisely delineate functioning levels within each domain. Placement of an individual along dimensions within skill sequences provides the teacher with vital information concerning the skills the individual has mastered, those that remain untaught, and in what order they might be presented. In addition, utilization of developmental skill sequences might minimize the potentially deleterious effects of changes in teachers and administrators on longitudinal programming. Obviously, a precise delineation of the current functioning level of a student on a variety of educationally important dimensions is more relevant to the development of viable instructional services than the use of such descriptions as autistic, severely retarded, trainable, psychotic, emotionally disturbed, and low MA.

Finally, while the provision of longitudinal developmental services is a goal to which we all must strive, we have an extremely long way to go before realization. There are persons around the country who have developed relatively good preschool or postschool programs, others have developed reasonable public school age programs, others have developed notable parent training activities, others have potentially valuable research projects in operation, etc. To our knowledge there is no place in which all the needed longitudinal service components are operating to such an extent that the development of large numbers of citizens over long periods of time is maximized. Certainly, we still need to develop isolated bits of information, certainly extraordinary case study achievements will continue to be inspirational; but these and other such delimited endeavors rarely provide substantial changes in the life styles of many severely handicapped citizens.

III. How does a teacher intend to teach the student to perform a skill?

There is no doubt that teachers can formulate logically defensible longitudinal curriculum sequences and ingenious clusters of apparently relevant task analyses. However, if a teacher cannot teach students to perform the skills required by the sequences and analyses, then all is for naught. The procedures, techniques, tactics, strategies, etc., teachers use to reach new skills may be referred to as the *how* of instruction. Without a technology of *how*; *what* to teach is rhetoric.

Arriving at an empirically tenable system of *how* to teach new skills to severely handicapped students is one of the most crucial challenges confronting the educator. Particularly since delineating an appropriate how to teach is almost always confounded with varying degrees of visual, auditory, motor, attending, etc., impairments.

Precise and replicable statements as to how to teach new skills are unfortunately quite rare. What may be an effective procedure for teaching one student or one group of students may be inappropriate for another student or group. In addition, even such apparently precise techniques as those generated from the operant conditioning laboratories under the rubric of behavior modification and discrimination training are probably arts (Bricker, 1970).

Statements as to how to teach severely handicapped students have emanated from and will continue to emanate from many sources: electrical and mechanical engineering, human development, special education, psychology, teacher and parent ingenuity, the history of education, what grandmothers once did to name but a few. In an attempt to be eclectic and practical and still be relevant to the problems of severely handicapped students, we have organized information from a variety of sources into what may be referred to as basic principles of acquisition and performance. Many of the terms used to describe these principles have been taken from literature related to operant and respondent conditioning, discrimination learning, concept development and imitation learning. However, it should be emphasized that these principles, techniques, tactics, etc., must be adapted or converted for classroom use; that many schools of thought describe the same event with different words; and that the principles available for systematic utilization now are not sufficient for the educational community to provide the best possible services.[2]

IV. How can a teacher empirically verify that the skill of concern is being, or has been, taught?

Some teachers do not even attempt to systematically assess any aspect of student progress; some teachers attempt to record every response every student makes every minute the students are in school; some teachers use one particular measurement system to the exclusion of all others. The position offered here is that teachers should have the skills necessary to implement a variety of measurement designs and techniques in such a manner as to foster a smoothly flowing instructional environment, yet in a manner that also allows the systematic recording and empirical verification of crucial aspects of student development.

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[2] A more detailed listing of basic principles of acquisition and performance and appropriate references are available upon request.

There can be little doubt that direct measurement of the developmental progress of severely handicapped students is a vital aspect of any instructional system. Perhaps the following two passages are appropriate here:

> In any empirical definition of teaching, instructional measurement is crucial. With normal and mildly handicapped students, inferences about populations of skills made from samples and inferences about generalization of skills across persons and places and materials are probably necessary and tenable. Unfortunately, inferential measurement, in our judgment, is an extremely questionable measurement orientation when applied to most severely handicapped students. The general rule that we try to follow may be stated as follows: If you determine that a particular response, skill, concept, etc., is important to the development of the student, then it is incumbent upon the teacher to directly measure the existence of the response, skill, concept, etc., of concern (Brown and York, 1974, p. 9).
>
> Direct measurement is particularly crucial in attempts to teach cumulative tasks. If the correct performance of the response in component c of a task are dependent upon the correct performance of the responses in components a and b, then the teacher must guarantee that a and b responses are in the behavioral repertoire of the student before she even considers progression to component c. Since most developmental skills are in many ways cumulative (mathematics, reading, language, speech, practical arts), teachers of trainable-level retarded students must be prepared to spend relatively long periods of time and considerable effort developing basic behavioral repertoires (Brown, 1973, p. 110-111).

It should be noted and emphasized that in addition to competencies related to how to empirically verify (measure) student progress, teachers should also be exposed to rationales regarding why and when to measure and to a variety of approaches toward measurement.

The following is a selected listing of measurement issues, terms, designs, assumptions, tactics, etc., to which our teachers in training are exposed. It should be noted that most of the designs listed below are what may be referred to as "subjects as their own controls designs." However, in addition to the listings below, teachers in training, as part of their general preparation, also receive information regarding parametric and nonparametric statistical manipulations, intergroup designs, standardized tests, etc.[3]

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[3] A more complete listing and appropriate references are available upon request.

Basic Principles of Instructional Measurement

1. Subjective - Objective
2. Dependent Variable
3. Independent Variable
4. Intra-group Measurement Designs
5. Inter-group Measurement Designs
6. Correlated Designs (AB Design)
7. ABAB Designs
8. Test-Teach-Test Designs
9. Multiple Baseline Designs
10. Trials to Criterion Designs
11. Direct Measurement
12. Inferential Statistics
13. Cumulative Review Designs
14. Reliability
15. Correlation
16. Criterion Referenced Tests
17. Rate of Response
18. Intensity of Response
19. Frequency of a Response
20. Latency of a Response
21. Duration of a Response
22. Errors to Criterion
23. Population
24. Continuous Measurement
25. Parameter
26. Sample
27. Statistic
28. Probe Designs

V. Can the student perform a skill at a situationally acceptable rate?

Rate is a term which typically refers to the number of times a particular response occurs in a given time period. In an academic setting where often times a skill is a composite of different responses, the view of rate can be extended to include the number of times all critical components of a skill are performed in a given time period. There is no doubt that severely handicapped students have deficiencies in the rates at which they perform particular responses or clusters of responses. There are times when severely handicapped students manifest rates of responding that are too high. For example, a normal student might hit himself in the head once a week, a severely handicapped student might hit himself in the head five times per minute for months. A somewhat similar but different rate deficiency also manifested is the inordinate amount of time many students require to progress through a series of cumulative responses. If students have acquired a skill and performed it correctly a specified number of times, it does not necessarily indicate that the skill is mastered. In order for a skill to be considered mastered, that skill should be performed correctly at a relevant rate criterion (proficiency).

There are at least three reasons for including rate of correct responding as a component of skill mastery. First, if students are to compete with and be tolerated by other individuals in the community, they will have to perform skills at community acceptable rates. For example, assume that a student has been taught to make change and then the student is asked to go to a grocery store and purchase the items on a grocery list. In a situation that actually occurred, one of our students secured the items on the list, computed the total cost of the items, and then counted out the appropriate amount of money required to pay for the goods. Unfortunately, the counting of the money required almost five minutes. Thus a situation can exist where a student could accurately perform a given series of responses, but the time required for the performance may not be acceptable in a community setting.

Second, if a skill requires the utilization of a number of responses in sequence, a slow rate of responding may interfere with the performance of all components in the sequence by increasing the probability that the student may be unable to recall certain components. For example, assume a teacher gives a student a three component direction to follow. If the student takes twenty minutes to perform the first response, there is a good chance that she/he may not remember the cues for the last two responses.

Third, if one accepts the premise that a skill should be not only performed correctly, but performed at an acceptable rate criterion, then a question remains regarding when a rate criterion should be imposed upon skills that are cumulative. Because of a paucity of research in the application of a rate criterion in educational settings, a teacher faced with this question seems to have two major options. Assuming skills A, B and C are cumulative, a teacher may choose to require the student to: perform A at a proficient rate before moving on to B; next perform both A and B (i.e., in combination) at a proficient rate before moving on to C; and finally, perform A, B and C at a proficient rate before terminating instruction. A second option would be to require the student to perform A, B and C correctly. Once acquired, a rate criterion would be imposed upon the combined skill (A, B and C) in order to achieve an acceptable level of proficiency.

VI. What does the teacher intend to use as vehicles for the skill to be acquired and performed?

Tasks and task materials are vehicles through which skills are taught. Obviously, choosing tasks and task materials should not be a hastily made, arbitrary decision. Teachers should carefully design and/or choose tasks and materials that reflect a consideration of the unique problems presented by the students of concern. Since one of the primary goals of teaching severely handicapped students is to verify that skills acquired in controlled instructional settings will be performed in other more practical environmental settings, many tasks should be chosen for their functional use across environments.

Functional tasks can serve the dual purposes of providing concrete examples of abstract concepts which may increase meaningfulness (Zeaman, 1973) and of teaching practical skills that students may be able to utilize daily across many environments. For example, one-to-one correspondence skills (aligning members of two sets in an arrangement which manifests a one-to-one relationship between the members) may be taught through the aligning of blocks and bears, putting straws in cups, giving each classmate a cookie, or giving each place setting a cup, plate, spoon and fork when preparing for lunch. The latter two examples teach the skill while stressing function in applied settings; the former two simply require performance of the skill. The meaningfulness and utility that functional tasks can add to the acquisition of a skill argue strongly for their use when designing instructional programs.

Not all skills can be taught exclusively through functional tasks and materials. The types of tasks needed to teach many visual discriminations to severely handicapped students highlight this point. When teaching a visual discrimination skill the task chosen should make the essential stimulus characteristics (e.g., form, color, size) easy to discern. Although this point appears simple to apply, it has ramifications which, if not considered when structuring tasks, unfortunately may lead to the development of differential responding to nonessential stimulus characteristics. For example, assume a teacher wants to teach a student to discriminate the letter "A" from the letter "B." In an attempt to make the differences between the two letters easy to discern, the teacher presents a red uppercase "A" and a blue uppercase "B." In this situation the teacher may find that the student has learned that red is called "A" and blue is called "B."

A fundamental discrimination learning rule related to selecting tasks with which to teach concepts is to choose tasks which will insure that responding is controlled only by the essential characteristics of the concept. In the letter recognition discrimination task mentioned above, this rule requires that the task should be designed so that responding is controlled by the form of the letters, not by color, size, texture or spatial position, etc. When using a functional task, control over nonessential or irrelevant characteristics is often difficult to achieve. For example, if one of the tasks used to teach letter discrimination is labelling the letters in the words "men" and "women" as they appear on the doors of public restrooms, a multiplicity of scripts, colors and placements would probably be encountered which might impede acquisition of the skill. In such situations, nonfunctional tasks which make the essential stimulus characteristics easy to discern and concommitantly reduce nonessential stimulus characteristics should probably be employed initially. Once the skill is acquired, however, essential and nonessential stimulus dimensions could then be varied or introduced.

When relating to this issue Becker, Engelmann and Thomas (1971) suggest that to insure that essential stimulus characteristics control responding, instructional tasks should be chosen which allow the teacher to:

1. teach a concept through a set of instances and not instances of the concept (e.g., examples of the letter "A" and examples that are not of the letter "A"),
2. construct instances of a concept such that they all have essential concept characteristics, and construct not instances having none or only some of the essential characteristics,
3. frequently vary nonessential characteristics of instances and not instances to insure that responding is only to essential characteristics (e.g., when teaching the letter "A", the size, color, texture and position of instances and not instances of the letter should be varied).

Implicit in the above three suggestions is the assumption that students are attending to variations in essential and nonessential characteristics of the stimuli presented. Often it is not enough to simply expect that consistent manipulations of the stimuli will be both necessary and sufficient conditions to produce the differential responses of concern. In some instances having students verbally label stimulus dimensions (nonverbal students might use gestures) and stimulus choices may facilitate differential responding to essential stimulus characteristics, and also increase retention of correct responses through the development of mediators (Butterfield, Wambold, & Belmont, 1973; Borkowski & Wanschura, 1974; Bricker, 1972; Jeffrey, 1953; Jeffrey, 1958; Chatelanat, Henderson, Robinson, & Bricker, 1971; Zeaman, 1973; Zimmerman & Rosenthal, 1974).

Other situations in which a teacher might choose to supplement functional with nonfunctional tasks might be those that require repeated practice for the acquisition of a skill, since many functional tasks typically permit only one or two response opportunities for only a few students per day. It is probably not efficient though to simply employ a task because it permits repeated practice of a particular skill in that boredom and inattention which can compete with academic progress are many times end products of stereotypic repetition.

Whether a task is functional or not, teachers should attempt to utilize tasks and materials that have reinforcement value. Choosing tasks on the basis of their reinforcement value involves selecting tasks and materials with which students will readily interact, preferably in free play situations. (A free play situation is referred to here as one where the task is available, but the student is neither prompted to engage in it nor externally reinforced for engagements.) On many occasions teaching skills through tasks with reinforcement value may involve teaching skills through toys, games, music and songs (e.g., sight words may be taught through potentially dull flashcard drills or through potentially more interesting sight word games).

If it is necessary to teach skills for which few functional tasks can be readilly devised, then games, toys, music and songs which require the performance of the skills may enable the teacher to add an intrinsically reinforcing functional component while at the same time increasing the probability that maintenance through repeated practice in other environmental settings will occur after instruction. That is, games, toys, music and songs which require the performance of skills may be used to augment academic programming and as recreational activities to provide additional practice of skills in a variety of environmental settings.

Some criteria for selecting potentially reinforcing tasks are: a) tasks should be novel or offer results that are not always predictable; b) tasks should be matched to functioning levels. Tasks which are either too easy or too sophisticated are not appropriate. However, tasks just above current functioning level should hold interest and pace development; and c) tasks should allow active engagement and manifest cause and effect relationships (Piaget, 1952).

There are at least three major advantages to teaching skills through tasks with reinforcement value: 1) skills may be reinforced by allowing continued performance of the task and/or interaction with the task materials instead of relying upon teacher delineated reinforcers; 2) students are more likely to interact with the task materials and thus perform the skills taught through them outside controlled instructional situations; and 3) there should be an increased probability that students will visually and/or aurally attend to intrinsically reinforcing tasks and task materials, thus possibly eliminating the need to systematically teach attending - a necessary prerequisite to most teaching situations.

There are two additional factors which should be considered when delimiting the types and characteristics of functional tasks. First, a task that may initially appear functional may not actually be so for particular students who live in environments where there are few or no opportunities to perform related skills. Setting a table is a functional task through which one-to-one correspondence skills can be taught. However, if students live in an environment where they are not and may never be required to set a table, the task will not have functional value. Thus, teachers should attempt to insure that tasks are chosen that adequately represent the options that students have available in the environment in which they live or might live in the future. Second, tasks should be chosen on the basis of their facilitation of later skill development. This involves teaching tasks that will become components of higher level skills in a developmental sequence. Teaching students to count fingers as a rational counting task may not have much utility when rational counting is taught, but should have great utility when addition is taught.

In summary, when a teacher is considering what to use as vehicles for skills to be acquired and performed by severely handicapped students, tasks and task materials should be chosen on at least the basis of their: a) functional use to the individual student; b) ease of discrimination; c) accessibility to repeated practice; d) reinforcement value; e) facilitation of skill maintenance; f) accessibility or frequency of occurrence across settings the individual inhabits; and g) facilitation of later skill development. As it is unlikely that many tasks will fulfill all the criteria delineated, it is often necessary to teach a skill through many different tasks and materials.

VII. Can the student perform the skill across persons, places, instructional materials and language cues?

A stimulus generalization paradigm may be used to conceptualize selected aspects of severely handicapped students' failure to perform skills acquired in one teaching environment in other environmental configurations.[4] The summarization of laboratory research studies concerned with stimulus generalization contained in Mostofsky (1965) suggests that a given response must be taught with the teaching environment in a specified state or configuration. After a response has been taught, variations in some well controlled aspect of the initial teaching environment can be introduced and the presence of the response in the new environmental configuration can be measured. Research findings related to stimulus generalization suggest that if dramatic departures from the initial teaching environment are arranged, performance in the changed environment will probably be substantially different from performance in the initial teaching environment. However, if the changed environment is only slightly different from the initial teaching environment, performance in the changed environment will probably differ slightly if at all from performance in the initial teaching environment.

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[4] As used here environmental configurations include language cues, persons, places and instructional materials.

The gradation of responding observed when the performance of a response is assessed in environmental configurations slightly or dramatically different from the configuration in which the original instruction took place is known as a generalization gradient. Sidman (1960) states that, "The generalization gradient provides a mechanism whereby behavior can adapt to an environment that never exactly repeats any combination of 'stimuli.' If a successful form of behavior were to come under the control of the precise circumstances that were present at the time it was acquired, we should have to relearn the behavior each time the original situation reoccurred with its inevitable variations (p. 207)." In the following paragraphs attempts will be made to describe how a stimulus generalization paradigm may be used to conceptualize generalization across instructional materials, extraneous stimuli and relevant cues to respond.

Performance Across Instructional Materials

Assume that a severely handicapped student in a public school classroom has been taught to touch a ball when the teacher presents a small dark blue ball, a small dark blue cup and the verbal language cue, "Touch the ball." If the teacher then dramatically changes the task by presenting a large brown medicine ball three feet in diameter, a small dark blue cup and the language cue, "Touch the ball," it is relatively unlikely that the student will manifest better than a chance level of correct responding. However, if the teacher only slightly changes the initial instructional materials by presenting a small light blue ball, a small dark blue cup and the verbal language cue, "Touch the ball," it is likely that the student will consistently respond correctly to the new instructional material. To summarize, if dimensions of instructional materials are changed slightly, students tend to maintain responding or generalize across materials. On the other hand, if stimulus dimensions are changed dramatically, students tend to respond differentially or discriminate.

Performance Across Extraneous Stimuli

Extraneous stimuli, as the phrase is used here, are stimuli in the environment which are not intended to control a specified response. That is, touching a ball in response to a verbal language cue should not be a function of the size of the room, the color of the teacher's hair, the chair in which a student sits or the position of the objects on the table. However, it is possible that some extraneous features of an initial teaching environment can acquire response controlling properties. If a teacher does not allow for such a possibility, she may mistakenly conject that failure to perform across environmental configurations is solely a function of, for example, the student not attending to the form cues of the ball and the cup referred to above. In fact, however, failure to perform may be a function of dramatic changes in the chair, the table, the room, the color of the teacher's hair, or the position of the objects on the table.

Performance Across Relevant Cues to Respond

A relevant cue to respond is referred to here as a stimulus or stimulus cluster which is intended to control the response a student is to perform. In a classroom for severely handicapped students cues to respond are usually presented by a teacher or contained in instructional materials. However, such stimuli as school bells and the time on clocks also function as cues to respond.

Cues to respond typically have at least a verb component which indicates the action the student is to perform (e.g., touch, take, give, pick up) and a noun component which indicates the object of the action (e.g., touch the *ball*, pick up the *paper*). Cues to respond which have action and object components do not have to be verbal in nature: a stare by a teacher may be a cue for the student to "sit down on a chair;" a deaf educator may use hand signals to cue a student to "Touch a ball." These cues are nonverbal but nevertheless contain action and object components. In addition, it should be noted that slight variations in the physical topography of nonverbal cues to respond may not result in differential performance. However, it is likely that dramatic variations in nonverbal cues to respond *will* result in differential performance. Concommitantly, when the cue to respond is verbal, slight variations in the way words are articulated will probably effect performance minimally, while dramatic articulation changes will probably effect performance significantly.

In a stimulus generalization paradigm a student is required to make topographically similar responses despite variations in dimensions of the instructional materials and extraneous stimulus constellations. Performance across different verbal language cues certainly may be conceptualized within the framework of a stimulus generalization paradigm. However, performance across different verbal language cues requires additional discrimination training to generate differential performance to the different verbal language cues.

More specifically, a teacher can issue a series of different verbal language cues to respond and the appropriate responses to the different language cues could be topographically *dissimilar*. For example, a teacher could present the student with a slightly different colored ball and cup on each trial and rotate the cues,"Give me the ball;" "Touch the ball;" "Point to the ball;" and "Take the ball." The student would have to respond in a topographically dissimilar way to each different verbal language cue in order to respond correctly. In this situation the stimulus generalization paradigm applies in that dimensions of the instructional materials were varied such that the student was required to respond to a slightly different instructional material on each presentation of the noun component of the verbal language cues. However, in order for the student to respond correctly it was also necessary for the student to discriminate the different verb components of the various response cues and differentially respond to those cues.

In addition, however, a teacher can issue a series of different verbal language cues to respond and the appropriate responses across the different language cues could be topographically similar. For example, a teacher could say, "Pick up many," or "Pick up several," or "Pick up a lot," or "Pick up a bunch," and the student could respond similarly and correctly to all the different language cues.

Obviously, certain verbal language cues may present unique problems when attempting to teach a student to perform a skill across environmental configurations because the student may be required to respond differentially to components of the cues. For instance, assume that in an initial teaching environment a teacher taught 'Tom' to touch the ball when presented with a small blue ball and a cup; a large red ball and a pillow; a small brown ball and a potato, etc. and then proudly announces to Tom's mother that he now can indicate what a ball is when given a verbal language cue. That night, Tom's mother places a small blue ball and a cup in front of Tom and says, "Give me the ball" and Tom fails to give the ball to his mother. If it can be assumed that Tom did not fail due to changes in the instructional materials or because he responded to extraneous stimuli in the home environment, the reason for failure may be due to the change in the verbal language cues used. If the reasons Tom failed are related to the verbal language cue issued by his mother, then at least two hypotheses seem tenable: First, Tom may not have responded differentially and independently to the specific verb and noun components of the language cues in the school and home environments. That is, he may have responded to only the noun components of the language cues and therefore did not differentially respond to the different verb components. Second, Tom may have responded differentially and independently to the specific verb and noun components of the verbal language cues but did not know what action to perform to the "Give" component.

The implication for educational programming is that to teach a student to perform a skill across environmental configurations the student must be taught to appropriately respond to common variations in verbal language cues, extraneous stimuli, and task materials that frequently occur across environmental configurations.

If the success of a program is to be assessed in terms of student performance of skills across environmental configurations, then the objective for each major skill taught in a program should include student performance of skills across such selected environments. For example, the instructional objective,for a one-to-one correspondence skill might be: Given the language cues "Give each _____a_____," "Give every _____a_____," or "Put a (_____) in each (_____)" by at least three different control figures (e.g., teacher, mother, peer) across at least three settings (e.g., classroom, playground, home) and across at least three functional tasks (e.g., setting the table, passing out cookies, dealing cards) the student should perform the skill.

Potentially, there are many instructional strategies which could be employed to insure that students master objectives. Perhaps the following strategy may be reasonably effective. If students are to perform the skills across functional tasks, then teach the skill through a combination of functional tasks and nonfunctional tasks which fulfill the task selection requirements previously delineated. For instance, teach the students one-to-one correspondence through such tasks as passing out juice cups and giving each child a block. If the students are to perform the skills across settings, then it may be advantageous to teach the skills in several settings. For instance, teaching might occur in the gym, on the playground, in the hall, in the bathroom, and in a kitchen area using tasks appropriate to those areas. If it is necessary that students perform skills under the direction of several control figures, then several control figures may be used in instruction. If the students will likely encounter varied language cues to respond, then instruction should include cues to respond which frequently occur.

Many educators evaluate instructional program efficacy in terms of how quickly students advance through the steps of a task analysis or curriculum sequence. However, efficacy should also be assessed in terms of whether the students can perform skills across persons, places, instructional materials and language cues. Insuring that students can perform skills across environmental configurations in many instances may slow the students advancement through the steps of a curriculum sequence. To account for this, educators will have to incorporate measures of both rate of advancement through a curriculum sequence and performance of skills across environmental configurations into their evaluation of program efficacy.

VIII. Can a student perform a skill without directions to do so from persons in authority?

Individuals labeled severely handicapped are often referred to as externally controlled. That is, persons in authority usually tell them what skills to perform; how and when to perform the skills; if they perform the skills correctly or incorrectly; if they perform the skills incorrectly how to rectify the errors, etc. While responding appropriately to specific cues provided by persons in authority is the responsibility of all adults, there are situations in which performance is crucial but in which persons in authority are not present. In such situations it appears that severely handicapped students are particularly deficient and therefore quite vulnerable. One way to compensate for such a deficit is to teach specific skills, and then insure that those skills can be performed appropriately across environmental configurations without specific verbal cues being provided by persons in authority. Perhaps the following will elucidate.

There are situations in which it is appropriate for individuals to make a specific response to a specific cue provided by a person in authority (e.g., following a list of verbal directions; recording the food order of a customer in a restaurant). There is little doubt that severely handicapped students can acquire such skills and that such skills have enormous functional value. However, in these situations persons in authority are continously providing the relevant cues to respond. Obviously, such cue-response relationships are appropriate in some situations, but extremely inappropriate in others in that extraordinary dependence upon the cues of others in authority is fostered, and persons in authority are in effect determining all responses.

There are also situations in which it is appropriate for individuals to make a series of responses to only one cue provided by a person in authority (e.g., "Change the tire;" "Make the salad;" "Start working;" "Clean the tables"). Again, there is little doubt that severely handicapped students can acquire such skills and that such skills also have enormous functional value. However, here also persons in authority are providing at least the initial cues to respond and the problems delineated above may be attendant.

Undoubtedly there are thousands of situations in adulthood which require responding specifically to verbal or other cues provided by persons in authority. However, there are also situations which require that adults engage in a response or series of responses in the absence of cues to respond provided by persons in authority (e.g., when a person sees a burning sofa; when a person is alone and cuts a finger; when a person is lonely or lost; when shopping for food or clothing). If an individual responds appropriately when persons in authority are not providing specific cues to respond, that individual may be construed as manifesting self-initiated performance skills. Obviously self-initiated performance skills are crucial to the independent functioning of severely handicapped students.

Finally, there are situations which require that a person engage in a series of responses, evaluate the correctness of the responses, and, if necessary, correct mistakes without being verbally cued by an authority figure. For example, if a person is confronted with a burning sofa, he/she might smother it with a throw rug, check to see if it is still smoking, and if necessary, pour water on it.

It has been our experience that many classroom activities designed for severely handicapped students have not included manipulations that allowed the students to: a) perform skills in the absence of cues provided by persons in authority; and b) evaluate and, if necessary, correct errors.

Thus, we are suggesting here that teachers determine if it is appropriate for a particular skill to be performed without specific cues to do so provided by persons in authority. If so, teachers should arrange for such performance. In addition, if it is appropriate that a student perform a series of responses, evaluate the responses, and if necessary, correct errors, then teachers should also arrange for such performance.

In the recent past the writers and their colleagues have made attempts to teach severely handicapped students the skills necessary to initiate responses or a series of responses, to evaluate the correctness of the responses made, and if necessary, to correct errors with few if any cues provided by persons in authority. Such skills are referred to here as self-regulation skills. Nietupski and Williams (1974) conceived of rudimentary self-regulation skills as consisting of at least four basic steps:

1. Detecting or defining the task.

2. Arriving at alternative ways to complete the task ←
3. Implementing an alternative.
4. Assessing the outcome of the alternative

If the task is not correctly completed.

if task correctly completed, end of task.

In the Nietupski and Williams (1974) paradigm students may fail to self-regulate responding because: a) they do not self-initiate steps in the self-relation strategy; b) they fail to detect or define the task; c) they fail to arrive at an appropriate way to complete the task; d) they fail to implement an appropriate alternative; or e) they fail to evaluate the outcome correctly.

It is suggested here that self-regulation may be incorporated into a curriculum for severely handicapped students as follows: When a skill is taught, if practical, the students should be required to initiate all components of the self-regulation strategy to complete tasks related to that skill without verbal cueing from persons in authority. For example, if students are acquiring skills related to cooking, they should be required to initiate the preparation of their own meals without verbal cueing from authority figures. Stated another way, whenever a new skill is taught the students should be required to complete tasks related to the skill, generate alternative ways of completing the task, implement an alternative, and check the appropriateness of the alternative implemented. Self-regulation strategies should not be taught as segmented or isolated curriculum entities but as integral parts of all activities in which students participate.

Hopefully, if educators in conjunction with parents and other concerned persons can teach students to perform situationally appropriate skills without specific direction to do so, we will more closely approximate the longitudinal objective of independent adult functioning.

Summary

Several basic components of instructional programs for severely handicapped students were delineated and described. Obviously, each component is in need of further elaboration and refinement and methods of incorporating them into longitudinal curriculum sequences must be operationalized. The possibility exists that adherence to all components when attempting to teach all skills might be impractical and irrelevant. However, it has been our unfortunate experience to observe students fail because we did not systematically consider and accommodate to relevant instructional variables. Perhaps if teachers absorb at least the components delineated into their educational services, the general skill repertoires of the students in their charge will be enhanced substantially.

In addition, it should be noted and emphasized that there is no doubt that the version of an instructional program offered here will evolve into a different form in the future. Some components will probably be rejected, some will be expanded, and others will be added. Hopefully, what happens to this version will be a function of increased awareness of the students we are attempting to serve.

Finally, teaching technologies and other information related to the provision of the best possible educational services to severely handicapped students are in the initial stages of development. On the other hand, educators throughout the nation are being asked, ordered, or voluntarily striving to provide educational services to such students. When such an information/service gap exists, frustrations and failures are inevitable. Hopefully, through the collective efforts of many persons from many orientations and disciplines we will be able to demonstrate in the near future that comprehensive, longitudinal, and quality educational services can be generated and those services will result in substantial developmental changes in the functioning levels and ultimate life styles of citizens who at least for the moment, are referred to as severely handicapped.[5]

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[5] The reader interested in securing information concerning the materials, references, curriculum sequences, etc., referred to in this paper is encouraged to write Dr. Lou Brown, 427 Education Building, University of Wisconsin, Madison, Wisconsin 53706. Some materials will be sent free of charge. If there is a charge, the reader will be referred to the appropriate vendor.

REFERENCES

Becker, W., Engelmann, S., & Thomas, D. Teaching: A course in applied psychology. Chicago: Science Research Associates, Inc., 1971.

Borkowski, J. & Wanschura, P. Mediational processes in the retarded. In N. Ellis (Ed.), International review of research in mental retardation. Vol. 7. New York: Academic Press, 1974.

Bricker, D. Imitation sign training as a facilitator of word-object association with low-functioning children. American Journal of Mental Deficiency, 1972, 76, 509-516.

Bricker, W. Identifying and modifying behavioral deficits. American Journal of Mental Deficiency, 1970, 75(1), 16-21.

Brown, L. Instructional programs for trainable-level retarded students. In L. Mann & D. A. Sabatino (Eds.), The first review of special education. Vol. 2. Philadelphia: Journal of Special Education Press, 1973.

Brown, L., Bellamy, T., & Sontag, E. The development and implementation of a public school prevocational training program for trainable level retarded and severely emotionally disturbed students. Vol. I. Madison, Wisconsin: Madison Public Schools, 1971.

Brown, L., Scheuerman, N., Cartwright, S., & York, R. The design and implementation of an empirically based instructional program for severely handicapped students: Toward the rejection of the exclusion principle. Vol. III. Madison, Wisconsin: Madison Public Schools, 1973.

Brown, L. & Sontag, E. Toward the development and implementation of an empirically based public school program for trainable mentally retarded and severely emotionally disturbed students. Vol. II. Madison, Wisconsin: Madison Public Schools, 1972.

Brown, L., Williams, W., & Crowner, T. A collection of papers and programs related to public school services for severely handicapped students. Vol. IV. Madison, Wisconsin: Madison Public Schools, 1974.

Brown, L. & York, R. Developing programs for severely handicapped students: Teacher training and classroom instruction. Focus on Exceptional Children, 1974, 6(2).

Butterfield, E., Wambold, C., & Belmont, J. On the theory and practice of improving short-term memory. American Journal of Mental Deficiency, 1973, 77(5), 654-669.

Chatelanat, G., Henderson, C., Robinson, C., & Bricker, W. Early classification skills of developmentally delayed toddlers. In D. Bricker and W. Bricker (Eds.), Toddler Research and Intervention Project Report: Year I. IMRID Behavioral Science Monograph No. 20, Institute on Mental Retardation and Intellectual Development, George Peabody College, Nashville, Tennessee, 1971.

Jeffrey, W. The effects of verbal and nonverbal responses in mediating an instrumental act. Journal of Experimental Psychology, 1953, 45, 327-333.

Jeffrey, W. Variables in early discrimination learning: I. Motor responses in the training of a left-right discrimination. Child Development, 1958, 19, 269-275.

Mostofsky, D. (Ed.), Stimulus generalization. Stanford, California: Stanford University Press, 1965.

Nietupski, J. & Williams, W. Teaching severely handicapped students to use the telephone to initiate selected recreational activities and to respond to telephone requests to engage in selected recreational activities. In L. Brown, W. Williams, and T. Crowner (Eds.), A collection of papers and programs related to public school services for severely handicapped students. Vol. IV. Madison, Wisconsin: Madison Public Schools, August, 1974. Pp. 507-560.

Piaget, J. The origins of intelligence in children. New York: Humanities, 1952.

Resnick, L., Wang, M., & Kaplan, J. Task analysis in curriculum design: A hierarchically sequenced introductory mathematics curriculum. Journal of Applied Behavior Analysis, 1973, 6(4), 679-710.

Sidman, M. Tactics of scientific research. New York: Basic Books, Inc., 1960.

Sontag, E., Burke, P., & York, R. Considerations for serving the severely handicapped in the public schools. Education and Training of the Mentally Retarded, April, 1973, 8(2).

Zeaman, D. One programmatic approach to retardation. In D. Routh (Ed.), The experimental psychology of mental retardation. Chicago, Illinois: Aldine Publishing Co., 1973.

Zimmerman, B. & Rosenthal, T. Observational learning of rule-governed behavior by children. Psychological Bulletin, 1974, 8(1), 29-42.

PROGRAMMING FOR THE PROFOUNDLY RETARDED IN A NON-EDUCATIONAL SETTING

by

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April 2, 1975

How do you train the untrainable or educate the uneducable? The answer is obvious - by the very definition of the words, you do not. The contradiction is basic. Yet this is precisely what we have been saying we were trying to do for the mentally retarded for many years. We said on one hand that profoundly retarded persons were untrainable - and we said it in our actions, in our programs, in our buildings as well as in words - and on the other hand, we told our attendants in residential institutions to train them.

Our problems have stemmed from many sources - not the least of which is our failure to examine minutely the logic and consistency of what we said as compared to what we did. Basically, we have for a great many years accepted a medical model for a non-medical problem. Physicians, who held the traditional leadership in research in exceptionality, attempted to derive discrete etiologies to explain the various exceptional disorders. If one could find the cause of the disorder, then one could set about finding a cure, they assumed. Further, they reasoned, with successful treatment, all other manifestations of the disorder would disappear.

These assumptions probably are fallacious. Behavior is multiply determined and organic etiology may be only one of the many factors bearing on it. We don't have to wait for a "cure" to do something about the symptoms.

Yet, on the other side of the spectrum, our reasoning has been equally specious. The term "mental age" and "intelligence quotient" are convenient ones and comfortable to entertain. Who would notice the walls being built up around us to limit our resources and our inventiveness in actual training and teaching of the retarded.

So our actions have not borne out many of the things we actually have known for a long time. We know that mental age as determined by standardized intelligence tests is not a reliable predictor of training performance. And we know that regardless of their level of retardation, retarded persons are a highly heterogeneous group. We have persisted in referring to them as unteachable or totally dependent. We have placed them in indestructible sterile environments - tile to the ceiling, drains in the floor, furniture that is sparce and spartan, if indeed there is any at all. We told our personnel to train them - yet the very environment we had created told them, "We know you can't."

In the last few years, however, we have re-examined our concepts more minutely and we have found that we had many more resources than we may have believed. The profoundly retarded, as a result, have been trained to act and behave in a much more normal fashion.

Most of the persons who have been successful in training have used the stimuli-response-reinforcement model. This, of course, is also the foundation of programmed learning and the teaching machine.

Curiously, the essential aspects of this method have seen limited use for some time and may have been accepted earlier had it not been for an unfortunate choice of words to describe it. John B. Watson published work on the classical conditioning model shortly after the turn of the century. This was called "conditioning." This concept violated traditional thinking on individual freedom - it was an acceptable method for laboratory animals but not for humans. This, of course, despite the fact that each of us is "conditioned" constantly from the moment we are born! Behavioral scientists who followed Watson adopted the term "behavior modification" and so it became more acceptable. The method involved two major principles:

1. First, it is based upon reinforcement of rewards. People tend to repeat behavior which is followed by something pleasant or desirable. Behavior that is not reinforced tends to extinguish or disappear. With the profoundly retarded it is extremely important that reward be given immediately following the desired response. Timing is crucial, especially in the beginning.
2. The second principle, and the one which has major implication for teaching methods is that of leading the individual gradually to make the correct or desirable response by rewarding each improvement. This is called "Successive Approximations."

I must admonish that behavior modification techniques cannot lift a child above his own parameters. They can, however, modify the child's behavior in a more adaptive direction and allow for the acquisition of the new adaptive behavior. The intrinsic condition of the individual is not changed, but he learns to function more effectively as a human being.

We achieve success, with both normal and retarded individuals, by simplifying complex tasks. Quite often we begin with a response which very roughly approximates that ultimately desired. This process usually involves "priming", where we physically help the child perform as we want him to, then follow with a reward. We "fade" our help as he manages more of the skill, "refining" the response until it meets our expectations of capabilities. Rewards used meaningfully and systematically to chain together a series of complex steps have helped overcome inattentiveness and indifference. These are among the factors that impede the learning performance of profoundly retarded persons.

Timing, I must stress, is vitally important. Delay and some inappropriate behavior may intervene between the time of the reward and the correct response, leading the child to think the inappropriate behavior brought the reward. This is why most successful modifiers begin early to build a bridging signal into the training model. This signal is used just prior to or simultaneously with the reward. Usually it is a vocal signal such a "good girl" or "good boy." It lets the person know that we like what he has done and that a reward will follow. Or it bridges the time between desired response and the reward.

There are other important principles involved, but I shall turn now to successful programming and the elements which are essential to it.

First, we should establish goals and expectations appropriate to each individual child. Quite often, the success of any training effort depends upon one's ability to perform. The successful behavior modifier established expectations which individual children should meet within the limits of their handicaps. He then uses this initial level as a base line and proceeds to move the child systematically up the ladder to a higher level of functioning.

Periodic evaluations keep everyone informed as to progress. But I must warn you that we must measure fine incremental changes if evaluation is to meet its major goal; that of improving instruction.

There are few psychometric instruments suitable for profoundly retarded children and adults. In the past couple of years, there has been interest from several persons to provide a better measure. Daily anecdotal records are essential to the training program. These should include what behavior the teacher is attempting to shape, what reinforcement is being used; how effective it was, how well the child did, what words and gestures were used, what difficulties were encountered and similar details. Future problems should be anticipated and changes for the next training session suggested or outlined. When the child's ability is accurately assessed and when tasks are brought within his comprehension, there are fewer failures. Failures, of course, are what we must strive to avoid, especially with the deeply retarded.

The second critical area, where many programs fail, is in properly applying reinforcements. It is more unfortunate that to some this has been over-simplified.

In some instances, administrators have just handed M & M's to untrained personnel and said, "give them one when you see them doing something you like." On the other hand, it has also been made to appear to be a very complex, complicated model. For all practical purposes, it might still be in the laboratory or the Skinner box.

Having worked directly with paraprofessionals for the past several years on this problem, I am persuaded that they can be trained as capable behavior modifiers - not in a week or a month, for some will take years - and that results will be worth the effort.

If administrators really wanted to make significant change in the school without buying a single M & M, they could direct all personnel to give social rewards, such as hugs, smiles, praise only when it is deserved. From my experience, this is probably the most misused reward in residential schools.

In some cases programs do not succeed because there is not total dedication from the institution. A project will be doomed from the outset if the "traditional machinery" in the institution cannot be overcome. Short cuts to obtain needed equipment and supplies must be found and used. Adequate personnel at all times is essential. The administration must speak and act in a total commitment way. It is better not to start a piecemeal program, for failure affects our own future efforts just as it does these of the retarded.

I am persuaded that many programs do not get off the ground because key personnel become over-concerned with extinguishing maladaptive behavior. There is usually so much that needs eliminating that all of the staff's time and energy is devoted to tearing down instead of building. It is far easier, I fear, to think of what we don't like and want eliminated, than it is to try to set up a creative program.

I am afraid many of our teachers want us to "sock it to them." Unfortunately, an increasing number use a variety of noxious, aversive stimuli. There is no doubt about it stopping on-going behavior, but I for one feel there are many dangers inherent in such an approach.

How and who decides what is acceptable behavior and who sets the method of extinguishing it? I recall reading of a girl who made unpleasant noises in the ward. I am sure these screams were not pleasant to the ears of the ward personnel and eventually shock was used to extinguish them. Who knows how much damage was done. That girl may never develop language now because the only bridge you had to build on was wiped out.

It is my belief that the best way to decrease undesirable behavior is to program effectively for the child so he does not have an opportunity to engage in undesirable behavior. In my opinion, punishment has no place in the learning process, at least until the child has internalized or understands what is appropriate.

I do not see in the future a time when we can place in the hands of lower echelons the authority to use aversive stimuli. Nor can we leave to them the decisions concerning the use of such stimuli as are being currently used rather extensively. I am not convinced that programs using punishment will receive the total commitment from everyone - from parents, administrators and employees - which is necessary for success.

Simultaneously with shaping the child's behavior, we must reshape the environment in which he lives. So often today this environment is completely void of anything stimulating. Often the children engage in unacceptable behavior simply because it brings about sensory input. Screaming, rocking, head banging, and the like may indicate stimulus hunger. Sensory input is a cue in one's environment to which one makes a response. It may be music, a piece of furniture, or even unpleasant things. Too often the environment is too void or too complex for the individual to get an appropriate response. So, we must modify the environment to bring complexities in line with abilities, so the child can operate in his environment. As he gains in independence, the environment can be made increasingly complex.

Too often we see such things as showers, water fountains, windows and the like that are too difficult for adults of normal intelligence to manage. How much more they must affect the retarded.

Many programs, too, rule out the possibility of the child ever using the skills he learns. Residents are confined to one environment with little chance of incidental learning. That so many do not generalize but become stimulus-bound is quite understandable. By enlarging their world and exposing them to a variety of stimuli, much more can be revealed about the sensory acuity of the profoundly retarded.

Further, the more characteristics we reveal about a given stimulus, the greater the possibility of transfer. For example; an orange is yellow, round, grows on a tree, can be peeled and eaten or squeezed for juice to drink. The more meaningful the task you are attempting to teach, the greater the success. What better time to teach hand-washing than just before meals, or, a dressing drill before a trip or other outing. Whenever possible, teaching drills should be followed immediately by some pleasurable consequence.

Rewards must be meaningful and often this is not the case. In a very broad sense, there are two types of reinforcement: Primary, which satisfies a basic biological need (such as food or water); and secondary, which uses learned rewards.

It is desirable that every skill or task have rewarding characteristics. A child may have to be given primary rewards to learn to dress himself, but once he can succeed this should be reward enough. This behavior can be maintained for him, as it can for us, on the basis of intermittent social praise.

It is not easy to find meaningful rewards for profoundly retarded persons because they form strange attachments to odd objects. But again, it is worth the effort. What is rewarding to us or to one child quite often isn't to another.

Behavior shaping demands a great deal of thought, planning, and dedication. But in my opinion, reward training provides many rewards for those who make a sincere, intelligent effort to put it into effect.

SOME ISSUES IN PROFESSIONAL PREPARATION -

EDUCATION OF THE SEVERELY HANDICAPPED

by

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April 2, 1975

It's good to be in New Orleans again. How well I recall meeting here in a very productive national conference on early childhood. We've come a long way since then, haven't we?

As a professor who sees her career in the education of severely and multiply handicapped populations, the huge numbers in attendance here are very encouraging. Also, as I was informing my colleagues of where they might reach me today, University Place struck a familiar chord. Our own college, Teachers College, Columbia University opened its doors at the same address as this hotel - but in New York City in the mid 1890's. At the midpoint of the 20th Century, NARC opened its first offices on University Place, also in New York City. I would like to assume that this meeting, in this place, has been and will be equally fruitful.

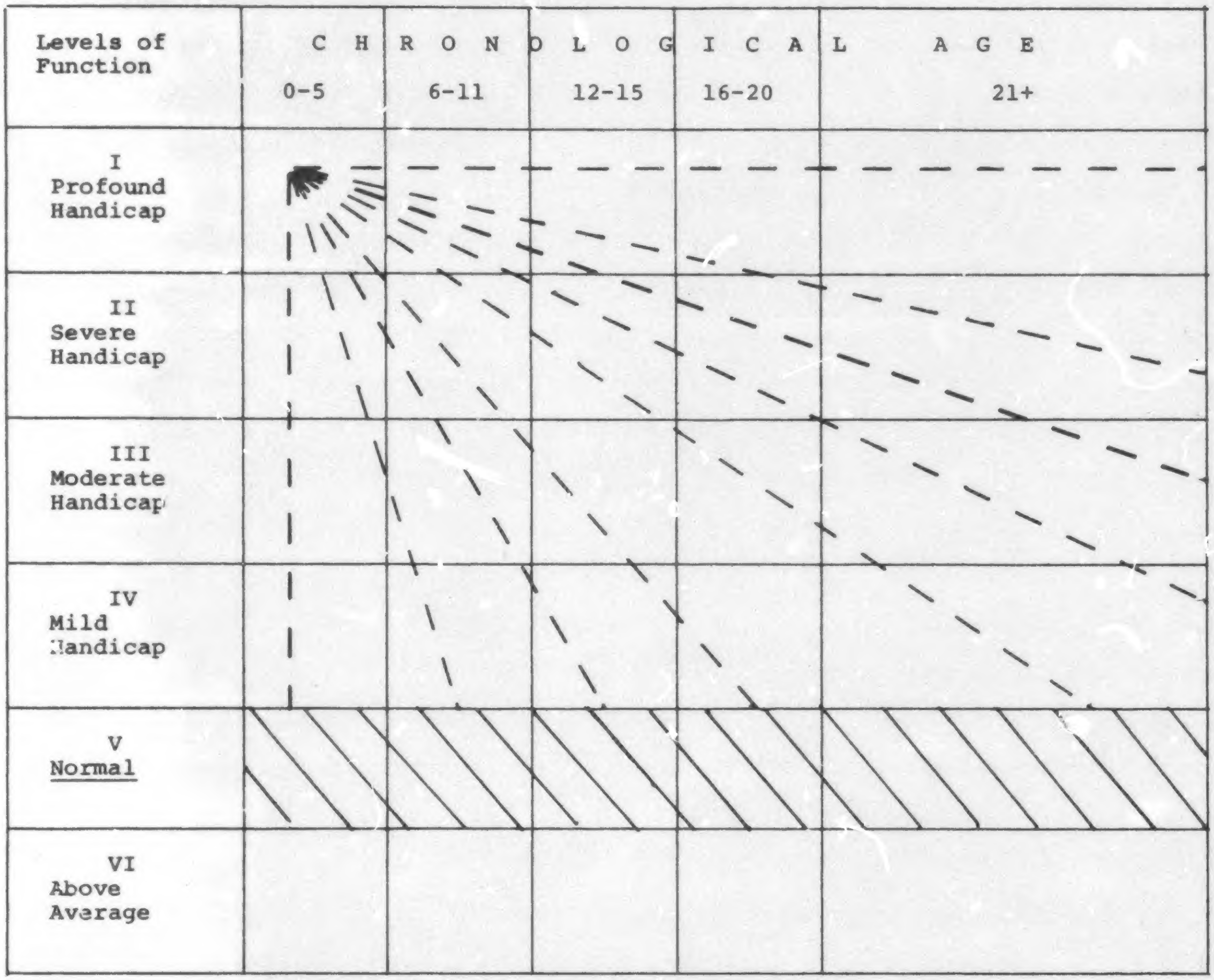
The invitation to discuss with you some of my ideas on issues (and they are abundant) relating to preparing teachers to work with severely and multiply handicapped children has turned out to be a greater challenge than I had anticipated it might be. However, Bacon said that writing maketh the exact man. My conclusion: We do not know the answers regarding teacher education; we hardly know the questions. We are still seeking the best means of identifying the specific competencies needed by teachers of severely and multiply handicapped children. We, at Teachers College, Columbia University, suspect that building upon the generic special education, broad training specializations of (1) mildly handicapped, and (2) severely and multiply disabled might make more sense than some of our present categorizations. The population in the latter specialization is mobile with growth in a variety of developmental areas at different rates and under different conditions.

Chart I depicts a view of this mobile group, based upon a conceptualization described by my colleague, Ignacy Goldberg. Before exploring the appropriateness of the proposed training categories of severely and multiply handicapped, we are spending considerable time describing the rationale for defining the population with assurance that the CA (chronological age) would not be the only dimension on which growth or change will be evident.

If indeed children fall into what might be called mildly or severely handicapped, it must be clearly recognized that they might move from one classification to another as time goes on. Ergo, the responsibility for avoiding that self-fulfilling prophecy based upon early IQ tests is awesome.

College professors' roles will have to change. We will have to be retrained as necessary - that means we must accept new professional mandates; we must move to meet our states commitments.

CHART 1


Levels of Function
CHRONOLOGICAL AGE
0-5
6-11
12-15
16-20
21+
I Profound Handicap
II Severe Handicap
III Moderate Handicap
IV Mild Handicap
V Normal
VI Above Average

The mobility of the severely and multiply handicapped demands teacher knowledge and skill in education assessments, far more complex than the administration of the ITPA, Peabody or currently employed achievement tests. It requires a working relationship with the other significant professional colleagues who are members of the evaluation and intervention teams, of the consumer groups, especially the parents who are indeed assuming an increasingly dynamic role in decision making regarding their children's educational placement and programs. Teacher Education requires expansion of the teacher/parent instructor role.

It might assist you in processing some of what I say if I attempt to define the population to which I am directing attention. At the moment, as we at Teachers College are restructuring our teacher education programs for more cross-categorical and competency based teacher education, we recognize that the children do have major problems relating primarily to MR, ED, LD and COHI groups. Many of them are placed in classrooms on the basis of these disabilities. Seldom can one of these problems exist in isolation. Yet, we are, for the time being, almost excluding the profoundly deaf and blind from our major cross-categorical effort until, with the help of our colleagues, Ann Mulholland and Robert Bowers, more formal planning can be initiated. However, each of them is looking at her/his target populations who have other learning impediments; communication between these two specialists and the others in our comprehensive special education program continues.

The severely impaired are seen as having a wide range of CA's and reflecting various etiologies. They function up to 50 percent below the norms for their chronological ages at the time of "initial" assessment in the following areas: Motor, cognitive, language/speech, social/emotional and self-care activities (feeding, toileting and dressing). The group's functioning is essentially within the usual developmental range for 0-6 years.

The instructional program is designed to help the child to increase his level(s) of performance of specific skills to cope effectively in his life setting with recognition that both the rate of development and the settings might change.

(Chart 1) This program necessitates the teacher's being prepared to instruct the student in a variety of settings and to assume a variety of roles with a variety of personnel.

I have just reviewed some of the vast numbers of issues identified in the task force reports from the 1973 Nation-Wide Institute on Leadership Preparation for Educators of Crippled and Other Health Impaired (COHI) - Multiply Handicapped populations. For example, Sandford Reichart, of Case Western Reserve, strongly reminded us of the impact of social change - the resultant status of teacher education - and the response mentality of the teacher educators.

I suspect we can even challenge the notion that teacher education in colleges and universities responds. Who, for example, will do the training of professional personnel to work with the so-called, "Right-to-Education" children, those severely and multiply handicapped boys and girls to whom appropriate education has been denied. I suggest that with few exceptions, leadership thus far has come from those residential facilities (through HIP, e.g.) and community programs where major in-service thrusts have been initiated...not the universities.

Dr. Reichart also asked us at the 1973 conference to declare ourselves as well as our pre-action commitments, and thus, avoid some of the unnecessary vacillation as attitudes and funding sources change. For example, to what extent have the 20-30 percent of children with mild learning disabilities drained our energies and distracted colleges and universities from the severely handicapped. I propose that teacher education, and maybe education generally can be accused of focusing on the "here and now" while clouding the directions that the "here and now" are taking. We appear to be waiting for social change to bombard us and wondering about next year's targets rather than to initiate programs based upon expressed philosophical positions.

Maybe the more critical issues relate not so much to the lack of teachers as to the lack of qualified teacher educators with training and experience in the education of these badly "clobbered" youngsters. From USOE experience, it would seem quite clear in early training grants under PL85-926 where decisions were made between immediate funding for teachers or for so-called leadership personnel. The quantity and quality of early leadership in the education of the mentally retarded as opposed to those in the education of the deaf attests to the differences in development.

More rapid production of educational leadership emerged in the field of MR from grants given to administrators and college personnel than in the deaf where focus was on teachers. As a result of action doctoral level personnel support was not available for staffing administrative and college posts. While for several years we were preparing more teachers, maybe we did not do as well as we might have. To meet university criteria for a tenurial position, doctorates were requested. Yet, there were almost no professors with training and experience in the education of the deaf. Is this not where we are in regard to the multiply handicapped?

Therefore would it not seem essential to initiate a leadership training program for those who might organize and conduct appropriate teacher education if they but had the knowledge and skill necessary. What appears to be current practice in most educational programs for the multiply handicapped reflects a telescopic and myopic approach to very complicated sets of problems. School administrators who administer well are appointed to head programs for the multiply handicapped. But, what do they know about programming for these populations. Their life time reward systems seem quite inconsistent with the objectives and outcomes of the programs for the severely and multiply handicapped.

Well intentioned and "scientifically" designed programs can produce aversive long-term results. For example, even in a highly structured and humanely designed behavior modification program, a teacher, using music as a reenforcer was able to demonstrate a teen-ager's ability to learn to pick up a designated item from a box, hold it and release it into another. However, in order to obtain the desired reward, the girl was forced to bend over to reach the material on her lap and then move in such a manner as to reenforce abnormal movements. Another 13 year old, testing at four to six months levels on most tasks, enjoyed seeing the jumping jack-in-the-box when he said "hi," a desirable objective with strong social value. Reportedly, "he giggled and his arms moved joyfully." But, soon it became apparent to the staff that the enjoyed startle was forcing reversion to hyper-extension and reactivation of the asymmetrical tonic neck reflex (ATNR) which precluded functional use of his hands. On this slide, Billy is shown in a side-lying position in which he can calmly respond; his hands are available for use. The teachers' position in relation to Billy will make a difference. Unfortunately, for the most part, neither educational supervisors nor the college professors are knowledgeable enough to realize the consequences of the systematic instruction they chose to implement.

Quite startling can be the effect of requiring self-feeding too early. Note this youngster's responsiveness and pleasure as he enjoys the food which he finally gets to his mouth. But, look again. His fingers and hands are abnormally contracted; his hand, tightly against his face is pulling down on his eye, a pattern which if continued will interfere seriously with his vision; the evident hyperextension combined with the contractions will undoubtedly reduce rather than increase independent self-feeding. It would seem more appropriate to provide assistant correct raising of his arm with resultant receipt of food after the child's self-initiated final movement of this feeding task. Such focus on correct achievement of sub-tasks would be on long-term function rather than immediate performance employing movement patterns which will preclude later physical control (Finnie, 1968, Manning, 1972).

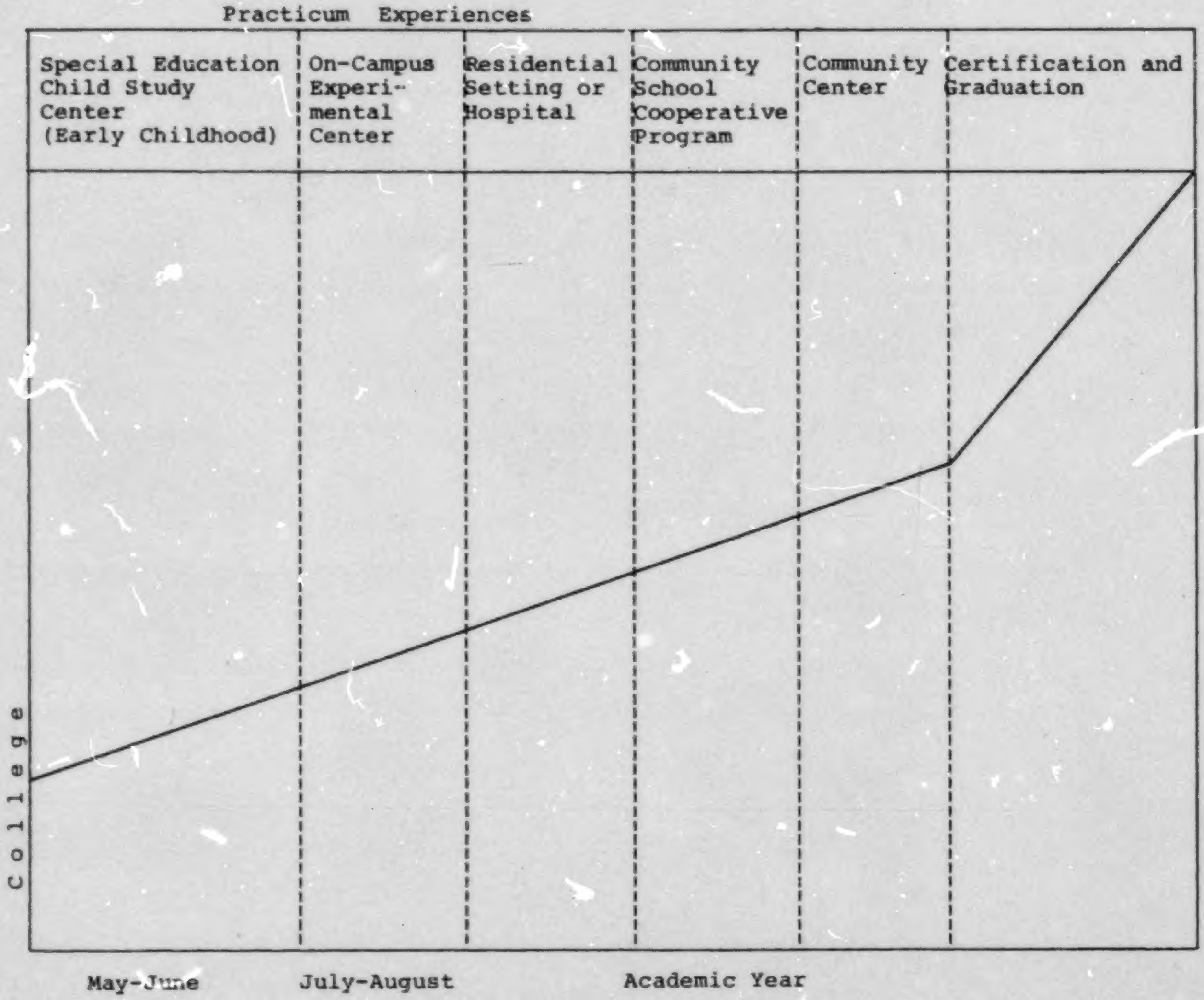
How clearly I recall Elsie Helsel's (1973) emphasizing that the preparation of this teacher requires a cross-disciplinary approach...that it cannot be the job of professional educators alone. Nor can it be confined to isolated courses, even from instructors representing a variety of disciplines. Numerous issues arise upon the suggestion that professional staff interchange roles in order to increase the integrity and wholeness of the child's learning and developing process. Depicted here is a teacher rotating a child's hip and holding one of his arms stable as Joey, in a side-lying position reaches for the yellow airplane. Note that it is the teacher, not the OT or PT assuming the role of the therapist as she positions Joey who will now have one hand free and relaxed - and who will be able to focus on the target. The following slides highlight the trans-disciplinary approach to the education of severely and multiply handicapped.

Even if we agree on the concept of role release from one discipline with continued accountability as another accepts the role, how can the teacher education institution restructure itself to accommodate the professional "mix?" What is or will be most effective - a comprehensive multi-disciplinary training program or one in which a representative of each of the most related specialists such as occupational, speech and physical therapists, psychologists, linguists and audiologists, pediatricians and public health nurses are on-campus most of the time as they participate in the cross-disciplinary service as well as training capacity? Or, will skilled inter-disciplinary teams conducting short term training sessions for professions including teacher populations produce better results?

As we know, present teacher preparation is intensive and expensive; adding this new dimension increases the institutional strain for expedition and quality. But, if we believe the children are entitled to life - then, they are entitled to the most effective teachers possible. Ergo, we will find a way and it will be implemented.

We hope to be able to conduct a series of three day work sessions whose participants will be in-service personnel working with atypical infants. The staff will focus on cognition, motor development, personal/social factors and pre-speech and feeding. The students will be mixed professionally, but the majority will be teachers, i.e., "education-type" people. Extra funds will be needed for such an enterprise, but it appears necessary to help nurture the potential leadership and to direct fantastic energies of professionals concerned about providing optimum programming for boys and girls heretofore not generally included in schools. The sequence of experiences as presented in Chart II might be clarifying. Again, issues abound. Principal among them are: Who shall supervise the training? Where can suitable practicum centers be found? To what extent are the staffs of these facilities prepared, or even willing, to accept these students with needs grossly different from those of the usual students?

CHART 2



Progression in Work with Severely and Multiply Disabled Children

First in the sequence for these prospective teachers is observation and educational diagnostic work-ups in a Special Education Child Study Center (Child Study Slides) with young exceptional children. Open and informative reporting to parents has proved helpful. Staffing a summer experience in an on-campus (slides of the Easter Seals Summer Program) college/community center in which students and faculty work intensively, design equipment and extend the children's experiences.

The preceding presentation might be summarized as follows:

1. The severely and multiply handicapped are not a unity. They are more like other children than different, but teachers need to be able to develop knowledge and skill about how and at what stages of development their pupils function; how they learn best, how to modify the environment to promote such learning and how to evaluate not only the effectiveness of that learning but how the specific successful intervention might be affecting the child adversely in other areas of development.
2. All too frequently teacher educators, program administrators and supervisors at state and local levels are not knowledgeable enough about the potentials of the populations or the variety of interventions available to them from disciplines other than education or pedagogy.
3. Interdisciplinary team work no longer appears adequate to assure continued high level programming for the severely and multiply handicapped. Teachers will do well to learn with and from their colleagues, i.e., (1) actually perform tasks deemed as the traditional province of other professional workers, (2) actually release some of their traditional roles to others (including parents) without losing the responsibility for accountability of what is done and how, (3) each professional worker retains his professional identity and its obligations to continue study in his or her own field.

   For teacher education, the question becomes how -

   -- with our course structure,

   -- with professional training separateness,

   -- with present faculty (tenured and maybe super annuated),

   -- with present physical plants, and

   -- with certification and licensure practices all in this time of economic crisis, can we make the necessary changes to implement new structures and new professional preparation strategies?
4. Even recognizing our ability to help teachers to teach, how can we best prepare them to work with these youngsters and assure mobility for both teachers (in their job markets) and children (as their needs and as society) with its value systems change?

5. Prospective teachers and newly admitted special education students, even at the graduate level, express willingness and indeed enthusiasm for work with the severely and multiply handicapped children - how do we determine their suitability for the field - what are teacher educators prepared to offer - more of the same or a restructured cooperative program? But reports from even the presently competent identify an ego crisis when faced with the reality of specifying admissions criteria.

6. As we speak to ourselves here, we appear convinced that there is need for a sustained and systematic teacher education program. While such is not internally accepted in community schools, in state education departments (the situation is changing as legislative and judicial mandates, shall I say, encourage involvement).

   We obviously need strongly cooperative, collaborative and mutually supportive community and college relations - the serious consideration of parity.

7. Maybe we can capitalize on the hope and support implied in Arthur Jenson's statement - and I quote:

   > The only supportable upward shifts in IQ associated with environmental factors were related to...."young children whose initial social environment was deplorable to a greater extent than can be found among any children who interact with other people or are able to run about out of doors." For these children, he suggests that "a shift to good average environmental circumstances can boost the IQ 20 or 30 points and in extremely rare cases as much as 60 to 70 points."

All of the target population of this conference will not so shift from group 1 to 2, or 4, or even 5, but let's not prejudge.

With teachers aware of this challenge, who know how systematically to structure programs and who are capable of intellectual and creative application of basic principles, we are ready to embark on a competency-based teacher education program with strong community participation. Then, we as educators will enable what might be considered "upward mobility" as teacher education in this field is based on a philosophical base demanding commitment and attention to an actively involved child and later an adult who but a few years ago sat (or wasted away) in the sterile environment of his own home - or of a non-responsive residential center, be it large or small.

Your being here in such large numbers will undoubtedly mean that new professional relations are and will be developing and subsequent communication will lend support to our early efforts at teacher education, many of which have so far been isolated and hesitant. Some dramatic changes can occur even with altering present course numbers or college fee structures; we can make changes within our own colleges and in our communities.

Thanks again for inviting me here. I have hit but a few of the issues. The road ahead is still rocky. Errors will be made but with comprehensive, thoughtful and on-going evaluation to resolve some problems and issues, a few inroads will be made in the education of some groups of newly enfranchized citizens.

REFERENCES

Finnie, N. R. *Handling the Young Cerebral Palsied Child at Home*. New York: E. P. Dutton and Company, 1968.

Helsel, E. et al, "Community Agency Involvement," in Connor, F. P. and Cohen, M. (Eds.) *Leadership Preparation for Education of Crippled and Other Health Impaired - Multiply Handicapped Populations*. New York: Department of Special Education, Teachers College, Columbia University, 1973.

Jenson, A. R. "How Much Can We Boost IQ and Scholastic Achievement?" *Harvard Educational Review*, Winter, 1969, pp. 1-123.

Lippman, L. & Goldberg, I. I. *The Right to Education, Anatomy of the Pennsylvania Case and its Implications for Exceptional Children*. New York: Teachers College Press, 1973.

Manning, J. "Facilitation of Movement - The Bobath Approach." Physiotherapy, 1972, *58*, pp. 403-408.

Reichart, S. "The Impact of the Changing Social Scene," in Connor, F. P. & Cohen, M. (Eds.). *Preparation for Education of Crippled and Other Health Impaired - Multiply Handicapped Populations*. New York: Department of Special Education, Teachers College, Columbia University, 1973.

THIS CRAZY BUSINESS

LEADERSHIP IN MENTAL RETARDATION*

by

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April 2, 1975

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One of the things I heard this morning on my way to the airport was an advertisement for the New York telephone company. It reminded me of an old, old skit that I hadn't thought about in several years, one of my favorites. I thought maybe I would review it for you because it has some relevance to the remarks that I am going to make today.

The skit included Sid Caesar, Carl Reiner and Mel Brooks. They went into a bank and one of them picked up his gun and said to the teller, "Stick 'em up! The first one to move gets a bullet right between the eyes." Then Mel Brooks picked up the satchel and ran to the teller to collect the money. The fellow with the gun raised it and shot Mel Brooks right between the eyes.

The other one said, "God! He's one of us!"

And the shooter said, "But a rule is a rule!"

Well, we have a lot of rules in education and I suspect that most of them are heeded - irrespective of their relevance or need at the time. Oh, do I wish I had the time today - you had the time - to talk in an unhurried way on human policy and on epidemiology. I think epidemiology is an important aspect of the total problem that you are dealing with here at this conference. And I wish we had the time to speak about this monolith that is called "Mental Health and Mental Retardation" - to talk about teachers, psychiatrists and other doctors.

I have to admit that it is not easy for me to make short speeches no matter what some of you may be wishing. And, it isn't even easy for me to write short papers. I did send a paper to the chairman, but it is 105 or 110 pages long. I have a few copies back home. If any of you want a copy, I will be glad to send one to you if you will drop me a post card at Syracuse.

But I don't have the time, and you don't have the time, so let's not delay.

I want to talk this afternoon about this crazy business we are in. It is craziest of all for those whom we call severely and profoundly mentally retarded - terms that are not right for people. And yet, now that we have invented the terms, we use them. We are unable to speak to the clients that we work with - the people that we deal with - without using terms that we know are not right.

I remember a few years ago, I was asked to give an address at Syracuse as part of their centennial celebration. In that talk, I raised the rhetorical question, "Can there be a better world for the mentally retarded?" In answer to the question, I concluded, "no, there can't. There can't be a better world for the mentally retarded or the mentally defective or the disturbed or the homosexual or the insane. There can only be a better world for people."

And yet, I didn't have to say that to those folks. I don't have to say it to you. We all know that labels, "severe" and "profound" are no more a person than a photograph is a person. We say it, we nod our heads and we agree, yet we continue to use the terms.

Well, because of the time and the terribly oppressive length of what I had written, I have decided to read a little and then talk because I think I will be able to say things, if not better, at least more quickly, if I speak rather than read. But I will begin with the reading part.

The content of what I want to say is derived from my years as an administrator - an administrator in government for at least one year where I served as the State Director of Mental Retardation Programs, and in academia where I directed a University program. Throughout this talk my objective will be to illuminate certain issues of importance to you here and to "realify" these issues.

Essentially, the plan is to present a personal analysis of this crazy business we call "mental retardation." However, it may strike some readers that this presentation's organization is more the reflection of idiosyncratic conceptualizations than logical processes. Now, I must admit that I believe that, in this crazy business, one fights general craziness with any resources at his command, even those which are paradoxical or illogical. In this regard, my long suit has always been independence. Some people may define such resistance as hostility, a transference mechanism, or whatever; I choose to interpret their definitions as other examples of this crazy business. In a world of continuous war on peace, where people incarcerate, and even kill each other, because of labels ascribed to or withdrawn from human beings, should anyone be surprised to hear here that I call this business crazy, that there may be some who will think me crazy for it, and that I would find such reactions to be but additional illustrations of the craziness in our field?

Every idea has an antecedent and, to complicate things beyond any hope for simplicity, every word has a past that some shared and others did not. Every sound evokes memories or draws "blanks" and, in spite of the confusion, we are enjoined not to be confused. In a collection of metaphors, Thomas Szasz's The Second Sin (1973) offered a bit of sense out of the complexity of human language and, in fact, even an allegorical explanation of Babel itself. Most everyone knows what the first sin was, knowledge of good and evil. But who remembers the second sin? According to the New England Bible, with a smidgen of Szaszian interpretation, the second sin was the sin of clear and precise language, the sin in communicating ideas in a universal tongue having universal meaning. When the Lord saw that the people believed that they could build a tower reaching to heaven, He knew that, with a single language, they had the capability to accomplish that and anything else they had a mind to do; they would no longer "need" Him. Therefore, the Lord confused their speech so that they would not understand all of what they said to one another. Then, He dispersed them from the land of Shinar to all of the corners of the earth and, from that time on, mortals could no longer compete with God. The babel of our languages, the confusion of our tongues, became the very foundation for human frailty and incompetence.

At times, I have thought that it would be grand to be a Pentecostal and have the gift of many tongues, especially when writing about values and means in mental retardation. On the other hand, it is as clear as language permits things to be clear that it's not multiple tongues that are needed, but more effective communication with whatever tongue is employed. No, the Pentecostal's won't help me in this assignment and, certainly, the language of this business is especially debilitating. On the other hand, one should start at the beginning, and the beginning for me always includes the language of theory, laws, beliefs, and prejudice--statements of principles-goals and their pragmatic translations. So, first the principles and goals and secondly, with a degree of diffidence, how I have interpreted them.

I have so often attempted to articulate goals and hypotheses that make sense to me that, if I'm not careful, this section may turn out to be a mere caricature of what I once believed, a habitual response to familiar stimuli. Therefore, in my attempt to avoid the instinctive for me, and probably the trite for you, I will make a special effort to set down these goals as if I had never before engaged in this exercise. So, for one who will play the game as if it's new, the first task is to state what he means by "goals." And, for one who supposedly never had to define the term and doesn't know how others have, it seems entirely reasonable to suggest that goals represent important ideas to be achieved during some future period. Stated another way, I envision the term "goal" as including to some degree, and embodying but not encapsulating, such other terms as "objectives," "hypotheses," "dreams," and--most of all--"ideas." At least while I write this presentation I have persuaded myself that there are compelling ideas that seek expression, that there are people in this field who agree and disagree with these ideas, that one way of gaining a perspective on the "mental retardation" business is to evaluate those ideas. The ideas are everywhere--in the literature, at the conventions, in the academy, in the air. Typically, we express them as researchable hypotheses or as pragmatic goals. Typically, we find them substantively discussed: (1) as the educability hypothesis, or the nature-nurture controversy, or the human potential movement; (2) in agreement that human beings are entitled to fundamental services and opportunities, or that there should be options available to all people; (3) in the belief that the state has certain responsibilities to the people, and the people have certain rights; (4) or as more specific goals, such as the recently publicized White House hope to reduce the incidence of mental retardation by one-half by the year 2000; (5) or as very general goals, such as to guarantee each person the right to be born healthy, the right to habilitation, the right to the least restrictive placement, the right to an appropriate education, or the right to equal protection and due process under the law. As I had said earlier, there are goals, objectives, dreams, hypotheses. But, at the beginning, there must be ideas. Unfortunately, one reason why many ideas are timeless and persistent, yet feeble, is that they haven't fully existed in reality; we don't feel compelled to implement them. And, one reason why we aren't so compelled is that ideas, like people, are themselves mixtures of weakness and strength--which itself may be an important idea. Possibly, such mixtures are inevitable, the products of dissonance between intent and practice, noble hope and dismal realization, and shared bitterness. The lesson is plain. Be humble, or one has very little to rely upon.

The following are some ideas that I feel are now in the air, not always because they are loud or striking but, rather, because they are fundamental and each possesses the sound of truth:

1. The idea that each human being has unduplicatable value. Not only is each person educable, not only is capability a function of one's practice and training, motivation, and expectations, not only must all developmental programs be individualized, but so must one's life objectives. This is by way of saying that, although we believe that people can change, one's value as a human being isn't bound to his educability but to his intrinsic and inalienable right to be respected--because

he is a human being, if for no other reason.

When I was a young boy, I read every book I could get my hands on that spoke about the Salem Witch trials. But it wasn't until recent years that I began to understand why they burned the witches. The people in those New England villages would come to testify that this is a good woman, a fine person, God-fearing; and that she takes care of her children and is good to her husband. Yet, they burned her! It's like Mental Retardation. The witches were not burned because they were bad. The witches were burned because they were witches. The Mentally Retarded are neither placed nor not placed because of their I.Q. Their due process is not ignored and their protections are not guaranteed because their heads are a little bigger or a little smaller or they don't ambulate as well as others. They are dealt with in those ways because they are Mentally Retarded.

2. The idea that children represent our great hope to improve society. One is born and he dies and, during the interim, the individual struggles to realize his gifts while the group--the government, the bureaucracy, what we call society--seeks to trap him, tame him, certainly to standardize him. But, sometimes for good and sometimes for bad, there have always been people who would not be molded. They cause us problems; yet, they are our major investment for the future. The dilemma has always been to know who should be molded and controlled and who should be as free as the wind, who is dangerous and who is our prophet. And, so, we encourage freedom and individuality, while we weed out those who appear to be dangerous and maladaptive, while we pray that serious blunders have not been perpetrated in the name of society. And children must always exemplify humanity's universal continuing enthusiasm for a better future; therefore, if we fail with children we fail with everything.

A week or so ago, I was sitting in a class at our university while the professor was attempting to instruct the university students on creativity for children. He was telling them things, showing them things, and anchoring those things to some psychoanalytic model. And then a student asked the professor, "If we listen to you carefully, will we be able to teach art to children?" It was then that I was so tempted to interrupt--to give a diatribe on why teachers should be taught about children and art. I wanted to say (but didn't, because it would have been impolite) that young children don't need teachers to instruct them. Young children have more ways and more finesse and more capabilities for expressing themselves than even the most gifted adult artist; that the reason - the only reason - for teachers to learn about children's art is so they may better understand children. Maybe that's the only reason for teachers in their training to learn about anything.

3. The idea of the creative person. Each human being has a will to live, but also a dream to express himself, to realize his individuality in unique ways. Someone once said that living well is the best revenge. And I truly believe, if we can agree that "living well" means living in one's unique manner, that living well is the only way. It's not enough to live, to exist, to be; all people seek to unfold, work to create something, and struggle for a principle or some different future.

4. The idea of freedom. A jaundiced assessment of our culture is that we revere life but disdain freedom. In our zeal to protect the weak, the aged, the so-called handicapped, the ugly and the different, we segregate and separate and stigmatize and make pariahs out of legions of people. We build industries to incarcerate--out of sight and out of mind--the blind and the retarded, so not only do we accomplish little to help them "see" and understand us, we preclude any possibility that we--the sighted, the brilliant, even the humanitarian--will "see" and understand them. Where is the liberty that children every school morning across America claim their country guarantees for all of its citizens? Where can we find total implementation of the principle that a human being is entitled to freedom under the law? And although we most zealously protect life, one's freedom is as important to that person as is his very life.

Each of the aforementioned ideas has a history, long and bloodied; as all powerful ideas, wars are fought and lives are lost because of them. We don't fight wars any longer because of geographic land, - island in the Pacific or in Asia. We only fight wars to control language and thus to control ideas. The idea that all people are entitled to freedom under a just law is one that has turned red the soil of most lands. So today, these ideas struggle against other powerful ideologies, moving ahead then falling back, in favor during one generation and out of favor in another. Today, at this very moment, it is no different, except for the difference in time and perspective. However, ideas dealing with freedom, individuality, human values and human resources continue to intrude into public consciousness, crying for legitimacy and support.

I have learned that one way to at least partly understand what our values are is to read the newspapers and listen to the public communicators. As the saying goes, look it up in the newspaper; everything begins with the birth announcement and ends with the obituary. Unfortunately, people may draw wrong conclusions from discrete facts, hence this attempt to relate "word" facts with "deed" facts. Now I would like to review with you a few of the things that I have been reading in recent weeks in our newspapers.

In New York State, where I was born and grew up, and where I now live and earn my livelihood, in recent months the following items appeared in our various newspapers:

1. "A bill passed last month by the state legislature and sent to the governor for signature changes the names of all department facilities for the mentally retarded from 'State School' to 'Developmental Center'..." (Mental Hygiene News, New York State Department of Mental Hygiene, May 24, 1974, p. 1).

No longer will we have to contend with the Syracuse State School, the Willowbrook State School, the Letchworth State School, the Wassaic State School or the Newark State School. Rather, there is a new model; new progressives and humanitarians appear to be in control. We now have the Willowbrook Developmental Center and the Letchworth Developmental Center. We change the names and, as if by magic alone, things are expected to get better.

2. "The playground of the Syracuse Developmental Center is going to be remodeled stressing safety and more creature comforts. Protruding bricks removed from all play areas and smooth epoxy applied to the sides of the slide to prevent abrasions are just two of the improvements to be made according to Al Clinton, assistant business officer of the Center. Improvements are being made to provide more safety to the retarded children that the Center serves." (Syracuse Herald-American, July 7, 1974, p. 28).

Some who read this announcement in our local paper remember that the Syracuse Developmental Center (formerly Syracuse State School) was once the oldest unremodeled and unchanged state school for the mentally retarded in North America and, just a year or two ago, it was torn down and rebuilt at an expenditure of approximately $25 million. The aforementioned playground, constructed at a cost of several hundred thousand dollars, received more than one national award for its innovativeness. Unfortunately, children couldn't play in this playground without submitting themselves to unusual physical dangers. Essentially, this award-winning playground built by the New York State Department of Mental Hygiene was, and probably still is, "unplayable."

3. "A wasteful dispute has long been seething between civil libertarians and elements of the psychiatric profession. The issue, in effect, is whether the mentally ill should ever be hospitalized against their will or must at all times be left to their own resources as a recognition of their rights as free citizens...

   "What are needed are open halfway communities, preferably located in rural areas, where the less afflicted can work at farming or crafts..." (New York Times, April 8, 1974, p. 34).

Why did the New York Times print this lead editorial, titled "Civil Liberties for What?"? What with the world at war, Watergates, impeachments, runaway inflations, pollution, crime, Henry Aaron and the new baseball season, with the whole world of problems and happy and sad events to choose from, why did the New York Times feel compelled to report to the world that mental patients really need communities away from typical society, preferably located in the country? Apparently, even the New York Times can be misled, possibly by a few influential colleagues or, just as possibly, by a great many Mr. and Mrs. Citizens who plunk down their 20 cents on weekdays and one dollar bills on Sundays for the privilege of not only reading the paper of record but giving it advice.

Apparently, the people in New York City have "had it." So too, apparently, has the New York State Department of Mental Hygiene. For, in an April 28, 1974 front page article, also in the New York Times, it was reported that the "...Department of Mental Hygiene, in a private memorandum and directive, has made a major change in its policy by telling its hospitals that 'we should not take the initiative in discharging the patient to the community.'" Why, after the scandals of Willowbrook and Letchworth, the reports of joint commissions, with a new morality and in a supposed era of concern, does the New York Times ask us to slow down, if not apply the brakes? Why does it appear that the State Department of Mental Hygiene is doing one of its familiar herky-jerky about-face dances, tiptoeing in a 180° turn, skimming over the issues and principles that honest people would not ignore? Well, the Department of Mental Hygiene not only has "had it," but they were "had"--by the "anarchists," the too-liberal psychiatrists, the reformists. When they were persuaded to evacuate some of their more embarassing units, they were not told that many people would be unimpressed with the idea that mental patients should live in ordinary neighborhoods, especially unimpressed if the designated neighborhoods were theirs. The Department of Mental Hygiene apparently never did develop a contingency plan, one that would permit them to deal with community resistance. Further, the Department of Mental Hygiene doesn't quite understand that, when mental patients or state school patients are released, it would be best to diversify their placements, not consolidate them in one or a few locations. And, when the residents of Long Beach, New York complained to the State Department of Mental Hygiene that, in fact, the Department was creating new quasi-institutions in the community with the purchase of converted motels or hotels for subsequent assignments of large numbers of mental patients to these facilities, the State Department of Mental Hygiene responded with lectures to the citizens on their moral responsibilities and the need for increased community acceptance and good will. The irony of it all is that the community lay people had a much more insightful analysis of the situation, the problems, and possible solutions, than the State Department professionals. The community group said, "O.K., send your mental patients into our neighborhoods, don't congregate them together. Permit us to continue to have normal communities--not places where there are large numbers of peculiar or different people, herded together in abandoned, dilapidated, or second-rate hotels."

The State Department of Mental Hygiene did not heed the community's advice, then pleas, then threats. They merely lectured at the community, to be good citizens, to accept difference, to have forbearance, to understand, to possess all those virtues that the professionals in the State Department seemed to lack themselves. So we had a backlash, and a new and strange coalition of conservative average citizens--people such as our own mothers and fathers, our friends--and the New York Times. Wonders--and those who answer the question negatively and probably correctly--will they ever cease? And so, we have a new state policy to slow mental patients' releases. Don't suggest discharge to them lest they request release. Cool it, boys; the natives back in the boonies are getting restless. Even the New York City sophisticates have "had it."

This conference is concerned with the so called severely and profoundly mentally retarded. I am sure that within the course of your deliberations, you have discussed such terms as "mainstreaming" and "integration." Not too many weeks ago, I learned about a sheltered workshop--an integrated sheltered workshop. I couldn't visualize it. What's an integrated sheltered workshop? My students told me I should see it. They said, "It's a wonderfully integrated sheltered workshop." So I went to visit this integrated sheltered workshop. And it was nice. There they were, sorting nuts from bolts, knocking out slats from Coca-

Cola bottle cases, sorting brown wires from blue wires that will eventually be used to lay a cable across the Atlantic or Pacific. You've been there; you've seen it. And the manager was bursting with pride, as well he should.

And after the little tour I said, "Tell me, sir, I understand this is an integrated sheltered workshop. How? Where? Show me."

He said, "You saw it!"

I said, "Well, look - assume I'm stupid. Explain it to me." I think by then he had assumed that anyway and it was no longer an assumption as far as he was concerned.

"No, look," he said, "you can see. We have 'retards'. we have 'disturbed', we have a few homosexuals, we have some dope addicts, we have some alcoholics. We got 'em all, and they are all together."

So you see, the words have so many meanings - "mainstreaming."

I was in a large New Jersey city a few months ago: The school principals and superintendents, the other functionaries and the college people each told me in no uncertain terms that the principle by which the special education program in this school system was operating was one of "integration" and "mainstreaming." I was very impressed until I heard with my third ear a remark made by one of the teachers. Following up, it was verified that, while the schools had enunciated publically their willingness to integrate and mainstream handicapped children, the teacher's unionhad just concluded an agreement with the school board that regular class teachers need not take handicapped children into their classrooms. I have also seen this in other cities across the country.

5. On February 15, 1974, at about 9:00 P.M., a safety officer at the Hutchings Psychiatric Center in Syracuse received a call concerning a man who refused to leave one of the Center's facilities. The officer responded to the call and confronted the man, asking him what he was doing there. The person, a recently discharged patient, said he was waiting to see a doctor. Because the man had been discharged, the officer told him that he would have to leave the premises. He refused to leave, even on repeated requests. Therefore, the Syracuse City Police were called to the scene and, one hour later, this former mental patient who wanted admission to a state psychiatric facility, was found incarcerated in a county jail cell, lying naked in a fetal position in his own feces. This incident, and several other incidents reported during the spring of 1974, led to the appoint-

ment of a commission to investigate mental health and mental retardation in Onondaga County. I learned about my appointment to the commission by reading its announcement in our local evening paper. Although my participation has, for me, been unusually interesting and "educational," after numerous meetings I remained puzzled by the commission's investigatory process, unclear about our charge, dumbfounded when I reviewed newspaper accounts supposedly summarizing our deliberations, and totally confused when I see commission colleagues on television discussing events, agreements, and disagreements that--presumably--I was witness to. On the other hand, why should anyone expect anything different in a system that "drags" some people to involuntary hospitalization and denies other people treatment they desperately seek?

A few weeks ago I was down in New York to visit the Willowbrook Developmental Center preparatory to some testimony I had to give at the Willowbrook trial. My secretary had given me a packet of mail which I had to look at. Here again in the Mental Hygine News I read:

> "The first Carol Burnett Good Housekeeping Award was recently presented to the housekeeping staff of Building 21 here (Willowbrook Developmental Center)...
>
> "An emblem was needed (for this new monthly award) and the warm, popular figure of Carol Burnett in her comic character of the charwoman seemed to fit the mood perfectly." (Mental Hygiene News, October 11, 1974, p. 4).

But you know there are some triumphs. They are so small as to make one embarassed to even mention them. But we do need our reinforcements, just as the children we teach need theirs. I have recently written a book that will be published this spring. It's a novel about a group of residents at a state school who take things into their own hands, so to speak, and make certain demands for themselves. The book is called Revolt of the Idiots. It's all fiction, but last week, at one of the state schools, this letter went to one of the officials at that school:

> "The resident government had a meeting with all the people of Unit 1E. We told them about our meeting with you and what you said. We all feel that we can't pay for the second telephone in any way. We are going to fight for our human rights...
>
> Signed,
> Residents of State School"

All of you, I am sure, have seen this ad in the newspapers. It's a Camel ad. "Can you spot the Camel Filter smoker?" You've all seen it. I am looking at this one Sunday morning about a year ago. I see that one fellow with a football jersey with the number 58 is described this way: "He doesn't smoke Camels, he is Tyrone

Shulace, 'beach pest.'" We are told in the ad that the "58" on his shirt stands for his I.Q. Further, Tyrone thinks that "off shore drilling is something marines do." He smokes "Huff 'n Puff super filtered cigarettes." Obviously that makes him retarded, unappealing, and deserving of whatever ridicule is heaped upon him.

We wrote a letter to the President of the R. J. Reynolds Tobacco Company and we received a wonderful response from C. A. Tucker, Vice President and Director of Marketing for the company, who said it was all a joke and nothing to get so upset about. He also said that we think you folks are doing great things, and we have joined you in the public spirited work that you are doing. We support all the local organizations involved with mental health.

We didn't like the letter, but thought that it would be the end of it. But just last week on an airplane, I see the same ad - same picture - but where they described Tyrone Shulace last year, they now say, "He's Hugh Midity, formerly Channel 58's whistling weatherman." They changed the ad! The "big-big" victory of the year!

Time is rushing - and I am still on the first page of the diatribe. Let's quickly see if I can pull some stuff together. It was my purpose to illuminate the hypothesis that intelligence is educable and that it is a function of practice and training. But irrespective of one's capabilities, irrespective of how the person scores, or how the person looks, fundamentally we have to ask the questions, "What's a human being?" "What's a human being entitled to because he is a human being?" And it seems that we say those words so easily. We come to agreement with such facility and with such good will. It's incomprehensible how all of these peoples who are in agreement have created a monolith. We have created an industry called "Mental Retardation" that rolls along at billion dollar clips. And to reverse the tide, to bring those resources into the community requires more than preachers and more than humanitarians. It also requires economists. The New York State Mental Hygiene budget today is a billion dollars. The Willowbrook State School budget is $50 million, $18,000 a resident. Last week I visited an institution in the East operated in collaboration with a university. They have 125 children at an operating cost of $8 million. For those who aren't quick with the arithmetic, that's about $57,000 to $58,000 a resident. What price will we pay to segregate people? What price will we pay to keep a child from his family, a brother from his sister, one human being from all the others?

Until we can solve the problem of dollar and resource flow and the monolithic industry created to segregate, we are never going to get those community programs that we seek. The dollars are all running the other way. Last year in New York State, the Mental Retardation budget in the Department of Mental Hygiene was $235 million. By my calculations, $233 million were for residential programs in a state that has publicly announced that it will integrate, that it will not segregate. And why? We don't believe that intelligence is educable. We don't believe that people can change. We don't believe that you can make a silk purse out of a sow's ear. We don't believe that Hellen Keller, before Ann Sullivan, before the enormous investment in her treatment, was mentally retarded. We don't believe in educability for the severely and profoundly handicapped. In fact, most of us don't believe in our own educability.

It is very hard for us to believe that all human beings are equally worthwhile. It is very hard for us to conceptualize a world that doesn't segregate and separate and incarcerate. A current zeal in America is to segregate the elderly. This is such a clear example, such a didactic model of what we have done to each other, that I am surprised that "problems" of the aged are not discussed more at mental retardation meetings than mental retardation. The one thing about the elderly that everyone knows (at least in the back of our heads) is that some day - if we are lucky (or maybe unlucky) we will be there. The one thing about the profusion of institutions for the elderly (that's so startling and so frightening and so indicative of the fragileness of the human mind and the human spirit) is that we aren't building those places for other people. We aren't building those places for some theoritical 1% of the population - the profoundly, or the severely, or the autistic or somebody else. We are building them for ourselves. We are building those places for us to move into when we come of age. We sit here and smile and are pleased and we don't complain. And we don't say "Stop! Stop all this! What are we doing to each other?" It's recklessness, it's the idea that people can't grow, can't change.

I could go on, but the one thing I promised is that I would end on time. So I will skip the next 20-25 pages. Let me end with something I wrote just the other day while I was coming back from another meeting at a state school. First, let me give you some background. I heard a preacher and his Sunday morning services. It was very nice and very comforting to me. I had spoken to him before the service. I got to know him a little bit. So I said, "If I could read that guy's mind, I don't think he would be saying what he is saying." So just for fun, and because I was writing something else, I rewrote his talk. Not the one he gave, but the one I thought he might have given had he let himself. And it goes like this:

"Bucko, this is a raw and dirty business we're in. It is wild and it is crazy. It makes you sweat too much and smell too much. It dulls your senses and hardens your sensibilities. Such work deludes us to believe that we can recognize those with delusions, much less cure them. It misleads us to think that we can measure thinking, when what we measure is our application of our value on thinking. And it discourages us from attempts to improve thinking because our metaphors about improvement preclude improvement.

"It sends us into dark areas for the illumination of problems and into Gehenna to find angels - in search of examples and places that are unexamples. Bucko, this is a pariah's business we are in - a wasted human's business - a disposable people business. It is evil work we're in. Yet there are saints among us. It's dirty, yet there are those here who are the purest of the pure. It's dehumanizing, yet we seek a common bond for humanity. Some hate the work, yet love the people. Some hate the people, yet love the work. And they do this public work in private places. That is, in places away from things and other people. See what I mean, this is a crazy business - this crazy business."